



**ARUNACHAL PRADESH STATE ELECTRICITY REGULATORY
COMMISSION (APSERC)**

**Determination of Aggregate Revenue Requirement for FY 2016-17
&**

**Order for Retail Tariff for FY 2016-17
And**

True-up of ARR of FY 2013-14,

Review of ARR of FY 2014-15

**For
Department of Power
Government of Arunachal Pradesh**

Issued on 29-02-2016

Arunachal Pradesh State Electricity Regulatory Commission

अरुणाचल प्रदेश राज्य विद्युत नियामक आयोग

**A.P. ELECTRICAL CIRCLE OFFICE COMPLEX, A-SECTOR, OPPOSITE
INDUSTRIAL AREA, NAHARLAGUN – 791110**

एपी विद्युत अंचल कार्यालय परिसर में ए- क्षेत्र, औद्योगिक क्षेत्र के सामने, नाहरलगुन - 791110

Telephone No: 0360-2350586, Fax No: 0360-2350985 , Website : www.apserc.in

टेलीफोन नः 0360-2350985 , 0360-2350586 , फैक्स नः 0360-2350985 वेबसाइट :

www.apserc.in

Before
The Arunachal Pradesh State Electricity Regulatory Commission (APSERC)

Naharlagun, Arunachal Pradesh

Petition No. TP 1 of 2016

In the matter of:

Determination of Aggregate Revenue Requirement (ARR) and Retail Tariff for sale of electricity by Arunachal Pradesh Department of Power to the consumer in the State of Arunachal Pradesh for the FY 2016-17

AND

Department of Power, Govt. of Arunachal Pradesh -----Petitioner

And in the matter of Suo Moto :

True-up of ARR of FY 2013-14,

Review of ARR of FY 2014-15

in respect of Department of Power, Govt. of Arunachal Pradesh

Present:

Digvijai Nath, Chairperson

ORDER

(Passed on 29-2-2016)

The Commission in exercise of the powers vested in it under section 62(1)(d) read with Section 62(3) and Section 64 (3)(a) of the Electricity Act, 2003 and Terms and Conditions for Determination of Tariff Regulations, 2011 issued by Arunachal Pradesh State Electricity Regulatory Commission (APSERC) and other enabling provisions in this behalf, issues this order, determining the Aggregate Revenue Requirement (ARR) and the Retail Tariff for the Financial Year 2016-17 for supply of electricity by the Department of Power, Arunachal Pradesh (DOP, AP) to the Consumers of Electricity in the state of Arunachal Pradesh. The Regulations state that the Distribution Licensee shall file the tariff Petition for Aggregate Revenue Requirement (ARR), complete in all respects, along with requisite fee as prescribed in the Commission's Fee, Regulations, 2011 on or before 30th November of the

preceding year. Hence the tariff petition for the financial year 2015-16 should have been filed by the Licensee on or before 30th November 2015.

The DOP, AP filed the petition for 2016-17 before the Commission on 15-12-2015. On scrutiny it was observed that there is some missing information. The Commission communicated same to DOP, AP vide its letter dated 17th Dec'2015. The details of the missing information were discussed with the representative of the DOP in one to one meetings. However pending receipt of some additional data/ information, the Commission admitted the petition on 25-01-2016, to avoid delay.

The Commission took into consideration the facts presented by the DOP, AP in its tariff petition. This order is in 7(seven) chapters which include detailed analysis of the Aggregate Revenue Requirement (ARR) and approved Retail Tariff Rates for the financial year 2016-17. The Commission directs the DOP, AP to take all necessary steps for implementation of this order from the effective date after issuance of a public notice, so that order is made applicable to all classes of consumers and energy bills are prepared accordingly, strictly in terms of the approved tariff.

The directives contained in the Chapter-6 should be strictly adhered to and compliance thereof, as desired by the Commission must be placed before it within the stipulated time, by the DOP.

This order shall be effective from 01.04.2016 and shall remain in force till the next tariff order issued by the Commission.

**Sd/-
(DIGVIJAI NATH)
Chairperson**

Dated 29th Feb'2016

1 Introduction

1.1 Arunachal Pradesh State Electricity Regulatory Commission.

In exercise of the powers conferred by the Electricity Act, 2003, (hereinafter referred to as Act) the Government of Arunachal Pradesh constituted the Electricity Regulatory Commission for the State of Arunachal Pradesh to be known as **“Arunachal Pradesh State Electricity Regulatory Commission” (APSERC)** as notified on 07.05.2010 (hereinafter referred to as Commission). The Commission constituted is a one-member body designated to function as an autonomous authority responsible for regulation of the power sector in the State of Arunachal Pradesh. The powers and functions of the Commission are as prescribed in the Act. The head office of the Commission is presently located at Naharlagun Arunachal Pradesh. The Commission started to function with effect from 02.03.2011 with the objective and purpose for which the commission has been established.

1.1.1 In accordance with the provisions of the Act, the Commission discharges the following functions:

- (a) Determines the Tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State: Provided that where open access has been permitted to a category of consumers under Section 42, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers;
- (b) Regulates Electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;
- (c) Facilitates Intra-State transmission and wheeling of electricity;

- (d) Issues licenses to persons seeking to act as transmission licensees, distribution licensees and electricity traders with respect to their operations within the State;
- (e) Promotes co-generation and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee;
- (f) Adjudicates upon the disputes between the licensees and generating companies; and to refer any dispute for arbitration;
- (g) Levies fee for the purpose of this Act;
- (h) Specifies State Grid Code consistent with the Grid Code specified under Clause of sub- section (1) of Section 79;
- (i) Specifies or enforce standards with respect to quality, continuity and reliability of services by licensees;
- (j) Fixes the trading margin in the Intra-State trading of electricity, if considered, necessary;
- (k) Discharges such other function as may be assigned to it under the Act.

1.1.2 Further, the Commission also advises the State Government on all or any of the following matters namely;

- (a) Promotion of competition, efficiency and economy in activities of the electricity industry;
- (b) Promotion of investment in electricity industry;
- (c) Reorganization and restructuring of electricity industry in the State;

- (d) Matters concerning generation, transmission, distribution and trading of electricity or any other matter referred to the State Commission by that Government.
- 1.1.3 The Arunachal Pradesh State Commission ensures transparency while exercising its powers and discharging its functions.
- 1.1.4 In discharge of its functions, the State Commission is guided by the National Tariff Policy (NTP) brought out by GOI in compliance to Section 3 of the Act. The objectives of the NTP are to:
- (a) Ensure availability of electricity to consumers at reasonable and competitive rates;
 - (b) Ensure financial viability of the sector and attract investments;
 - (c) Promote transparency, consistency and predictability in regulatory approaches across jurisdictions and minimize perceptions of regulatory risks;
 - (d) Promote competition, efficiency in operation and improvement in quality of supply.
- 1.1.5 The Commission has so far notified the following Regulations to facilitate its functioning.
- i. State Advisory Committee (SAC) Notification
 - ii. Conduct of Business Regulations- 2011
 - iii. Redressal of Grievances and Ombudsmen Regulations-2011 & 2015
 - iv. Fee Regulations-2011
 - v. Grant of Intra State trading License Regulations-2011
 - vi. Determination of ARR and retail tariffs Regulations-2011
 - vii. Terms and Conditions for Tariff Determination from Renewable Energy Sources Regulations-2012
 - viii. Renewable Power Purchase Obligations and Its Compliance Regulations-2012
 - ix. Redressal of Grievances and Ombudsman Regulation (1st Amendment)-2012
 - x. State Grid Code Regulations-2012
 - xi. Terms and Conditions of Intra-state Open Access Regulations-2012
 - xii. Electricity Supply Code Regulation-2013
 - xiii. Multi Year Tariff Regulation - 2013 superseding the Regulation of 2011 on

Determination of ARR and Retail Tariff Regulation.

- xiv. Service Conditions of Staff Regulations-2015
- xv. Standard of Performance Regulations- 2015

1.2 Arunachal Pradesh - Geographical Reality

The total area of the State of Arunachal Pradesh is 83573 sq. kms. The State is having a population of around 13.82 lakhs (2011 census). The State of Arunachal Pradesh is bounded by Assam in South, Bhutan in West, China in North, and Nagaland and Mayanmar in East. It's Capital Itanagar is about 380 kms. from Guwahati.

1.2.1 Arunachal Pradesh Department of Power (DOP, AP)

The Arunachal Pradesh Department of Power (APDOP) is a deemed licensee in terms of Section 14 of the Electricity Act, 2003. APDOP being an integrated utility, is responsible for transmission and distribution of electricity in the State of Arunachal Pradesh and also trading functions of Electricity. The Department of Power of the State of Arunachal Pradesh (APDOP) is responsible for power supply in the State of Arunachal Pradesh.

APDoP has a firm allocation of Power from Central Generating Stations of 137.84 MWs , that translates to about 391.33 MUs/ year based on % allocation of MWs from each plant and a normal PLF of each plant.

In addition APDOP is expecting to receive around 131.95 MUs (147 MUs in FY 2015-16) for FY 2016-17 of free power as 12% quota (48.60 MW) being allocation for home state from the Ranganadi HEP

Further, APDOP also receives about 52 MUs from DHPD @ Rs. 2.46/Unit (FY 2015-16 tariff)

Apart from this, the entire power requirement for APDOP is met through its share

from Central Sector Power generation, which is wheeled through the PGCIL network of North Eastern Region and power purchase from Deptt. of Hydro Power Development(DHPD), electricity traders/other sources. It also has small diesel generating units with annual generation capacity of approx. for FY 2016-17 is 0.25 MUs / annum to be operated in exigencies as and when required.

APDOP has a total installed capacity of 30 MW of Diesel Generating Sets owned by the APDOP kept as standby, to be used as and when required. The Power generated by these sets is not included by APDoP in the total energy balance. However, the cost of Fuel and lubricants is added to the O&M part of the ARR.

During FY 2016-17, APDOP is expected to serve about 2,28,553 consumers with an annual energy consumption of about 355.06 MUs. The consumers are broadly classified into following four categories:

- Domestic
- Commercial
- Industrial both HT & LT
- Others-Public Lighting, water works etc.

1.3 ARR and Tariff Petition for FY 2016-17 : Filing

As per the APSERC Tariff Regulations, the utility was required to submit the petition for ARR and Tariff in the month of November 2015 for fixing the Tariff for the next financial year. However, the Department filed the tariff Petition for the FY 2016-17 on 15-12-2015.

In the petition, DOP, AP has estimated an ARR of Rs. 406.51 crores and worked out a net revenue gap of Rs. 247.67 crores.

1.4 Admission of Petition and public Hearing Process

The Commission observed that the ARR filed by the petitioner was incomplete and

lacking critical and vital information as specified in Commission's Regulations on Terms and Conditions for Determination of Tariff- 2011 and Multi Year Tariff Regulation- 2013.

Pending receipt of additional information the ARR and Tariff Petition was admitted on 25-01-2016 and marked as case No. TP 1 of 2016 to avoid delay in processing of ARR.

The Commission directed the DOP, AP to publish the summary of the ARR and tariff proposal in abridged form and manner as approved in accordance with section 64(2) of the Electricity Act, 2003 to ensure public participation.

The notification for Public Notice of proposed ARR & Tariff proposal for FY 2016-17 was published by AP DoP in the following newspapers.

Sl.	Name of the newspaper	Language	Date of publication
1	Arunachal Times	English	24-12-2015
2	Dawnlit Post	English	24-12-2015

Through the public notice, the stakeholders/public were invited to furnish their objections and suggestions on the petition on or before 15-01-2016.

The Commission did not receive any objection/suggestion and hence the Commission did not feel the necessity of conducting the Public Hearing.

2 Petition Summary for Determination of ARR & Tariff

2.1. Aggregate Revenue Requirements (ARR)

The APDOP in its Tables 2.11 and 4.1 of the petition has submitted the Aggregate Revenue requirement and Revenue gap in Table 4.2 for the year 2016-17 for meeting its expenses and the estimated revenue with the existing tariff. The ARR and revenue gap are shown in Table 2.1 below:

Table 2.1: Aggregate Revenue Requirement Rs. Crs.-FY 2016-17 -Petitioner's Submission

As per Petition Table 4.1 : Aggregate Revenue Requirement, Income and Revenue Gap

(Rs. In Crores)

SL No.	Item of expenditure	Previous year 2014-15 (Actual)	Current year 2015-16 (Estimated)	Ensuing year 2016-17 (Projected)
a	B	c	d	e
1	Cost of Power Purchase	191.68	178.99	178.99
2	Fuel Cost	4.50	4.68	4.87
3	Employee costs	179.50	188.5	197.50
4	O&M expenses	22.00	23.10	24.26
5	Adm. & Gen. Expenses	1.00	1.05	1.10
6	Depreciation	0.00	0.00	0.00
7	Interest charges	0.00	0.00	0.00
8	Return on equity	0.00	0.00	0.00
9	Income Tax	0.00	0.00	0.00
10	Total revenue requirement	398.68	396.32	406.71
11	Non-tariff income	2.87	3.09	3.33
12	Revenue from existing tariff	127.95	134.35	141.06
13	Sale through Energy Exchange	9.72	11.84	11.84
14	Deviation export	1.21	2.81	2.81
15	Total Income	141.75	152.09	159.04
16	Revenue gap (10-15)	256.93	244.23	247.67

The Repair and Maintenance as at Sl no. 4 above is towards Maintenance of Assets as per the Petition for FY 2016-17.

2.2. Revenue Gap and Recovery

The Petition in table 4.2 shows that the revenue gap will be covered through Government Grant as under:

Table 2.2: Revenue Gap & Recovery-FY 2016-17 -Petitioner's Submission

Ref Petition Table 4.2

Sl. No.	Description of Items	Rs. In Crore
1	Aggregate Revenue Requirement	406.71
2	Total Income	159.04
3	Revenue gap (1-2)	247.67
4	Expected Government Grant	247.67
5	Net Revenue Gap (3-4)	0

2.3. Prayer

APDOP in its petition for FY 2016-17 has prayed to the Commission for:

1. To admit this Petition for approval of Retail Tariff for FY 2016-17 and determination of ARR for FY 2016-17.
2. To approve proposed retail tariff for FY 2016-17.
3. To approve proposed ARR for FY 2016-17.
4. To grant any other relief as the Hon'ble Commission may consider appropriate.
5. To pass any other order as the Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice.
6. The petitioner craves leave of the Hon'ble Commission to allow further submissions, additions and alterations to this petition as may necessary from time

3.Power Sector in Arunachal Pradesh

3.1. Power Supply Position

The APDOP meets the energy demand of its Consumers by getting power from AP Hydro power department and also purchase from Central Generating stations, including free power from NEEPCO, Ranganadi HEP. Per Capita Consumption of Power in Arunachal Pradesh is lower than India's average.

APDOP is getting free Power from NEEPCO, Ranganadi HEP to the tune of 131.95 MUs as per the petition filed for FY 2016-17. APDoP was been getting about 147 MUs free energy as per the earlier Petition for FY 2015-16.

APDOP has firm Power allocation from NHPC, NEEPCO, and NTPC as stated in the Table 3.1 below. APDoP also purchases power in open market / UI to meet its requirement in the State particularly, during peak hours and lean hydro season. APDoP also sells surplus from allocated energy to outside State licensees during the peak hydro season. APDoP receives power from CGS and other sources as per allocation from time to time as given below. The Power allocation and its cost /unit as submitted by the Petitioner are collated in one table as hereunder in Table 3.1.

Table 3.1: Central Allocation - Petitioner's Submission FY 2016-17

Ref: Petition Table 1.1, Free Power & Other Sources, Petition Table 2.1 and Power Purchase Cost FY 2014-15 Petition Table 2.1

Sl No	Station	Capacity - MW	Firm allocation to Arunachal Pradesh		Actual Utilised (MU) / Energy Utilized	(Rs. In Crores)			Unit Cost (Rs./ KWH) Calculated	Unit Cost (Rs./ KWH)
			in %	in MW		Power Purchase Cost	PGCIL, NERLD C & Other Charges	Total Power Purchase Cost		
1	NHPC									
a	LOKTOK	105	4.94	5.19	17.56	5.57	0.79	6.36	3.62	3.62

Sl No	Station	Capacity - MW	Firm allocation to Arunachal Pradesh		Actual Utilised (MU) / Energy Utilized	(Rs. In Crores)			Unit Cost (Rs./ KWH) Calculated	Unit Cost (Rs./ KWH)
			in %	in MW		Power Purchase Cost	PGCIL, NERLD C & Other Charges	Total Power Purchase Cost		
2	NEEPCO									
a	RHEP	405	6.462	26.17	71.58	18.06	3.21	21.27	2.97	2.97
b	Free Power		12	48.60	131.95	0.00	5.92	5.92	0.45	0.45
c	KOPILI-I	200	5.191	10.38	27.80	1.84	1.25	3.09	1.11	1.11
d	KOPILI-II	25	5.992	1.50	4.57	0.57	0.21	0.78	1.71	1.70
E	Khandong	50	4.194	2.10	3.66	0.69	0.16	0.86	2.35	2.34
F	AGBPP	291	5.694	16.57	97.05	44.42	4.36	48.77	5.03	5.03
G	AGTPP	84	6.132	5.15	37.61	9.49	1.69	11.18	2.97	2.97
h	DOYANG	75	6.852	5.14	10.74	3.01	0.48	3.49	3.25	3.25
3	NTPC									
a	FARAKKA	1600	0.19	3.04	21.22	8.05	0.95	9.00	4.24	4.24
b	KAHALGAON	840	0.19	1.60	11.71	5.24	0.53	5.76	4.92	4.92
C	TALCHAR	1000	0.14	1.40	13.89	3.01	0.62	3.63	2.61	2.61
4	OTPC									
a	PALLATNA	363.3	3.03	11.01	73.94	19.05	3.32	22.37	3.03	3.02
	Total			137.84	523.28	31.40	6.74	38.13	0.73	2.54
	Deviation Import				150.12	11.07		11.07	0.74	2.09
	DHPD				52.98	161.46	30.22	191.68	36.18	2.64
	Total				726.39					

The above includes drawl of entire power generated by APDHPD by APDoP. APDOP also has Diesel Generation which can generate about 0.25 MUs power per Annum.

3.2. Consumers' Base and Energy Sales Profile.

The category wise consumers and electricity sales to each category of consumers as projected by the Petitioner for FY 2016-17 are depicted in the table 3.2 below. To analyze the trajectories of Consumer base and energy sales, the sales are compared with actual sales of FY 2014-15 and estimated sales FY 2015-16.

SL No	Category of Consumers		Previous Year (Actuals) 2014-15		Current Year (Estimated) 2015-16		Ensuing Year (Projected) 2016-17	
			Consumers at the end of the year (Nos)	Energy Sale/ Demand (MUs)	Consumers at the end of the year (Nos)	Energy Sale/ Demand (MUs)	Consumers at the end of the year (Nos)	Energy Sale/ Demand (MUs)
1	Non-Commercial Consumers (Domestic)							
	LT							
	a)	1-Phase, 230 Volt	131339	96.73	137906	101.56	144801	106.64
	b)	3-Phase, 400 Volt	1819	16.14	1910	16.95	2006	17.79
		Domestic Total LT	133158	112.87	139816	118.51	146807	124.43
	HT							
	c)	3-Phase, 11KV	28	0.8	29	0.84	30	0.88
	d)	3-Phase, 33KV						
		Domestic Total HT	28	0.8	29	0.84	30	0.88
	e)	KJP & BPL connection	52971	20.63	55620	21.66	58401	22.74
	Total Domestic LT+HT		186157	134.3	195465	141.01	205238	148.05
2	Commercial Consumers (Non-Industrial)							
	LT							

	a)	1-Phase, 230 Volt	18370	17.68	19289	18.57	20253	19.5
	b)	3-Phase, 400 Volt	1024	13.1	1075	13.75	1129	14.44
	Commercial Total LT		19394	30.78	20364	32.32	21382	33.94
	H T							
	c)	3-Phase, 11KV	88	2.79	92	2.93	97	3.08
	d)	3-Phase, 33KV	2	0.06	2	0.07	2	0.07
		Commercial Total HT	90	2.85	94	3	99	3.15
	Commercial Total LT + HT		19484	33.63	20458	35.32	21481	37.09
3	Public Lighting and Water Supply Consumers							
	LT							
	a)	1-Phase, 230 Volt	1019	5.09	1070	5.35	1124	5.61
	b)	3-Phase, 400 Volt	122	1.93	128	2.02	134	2.13
		Pub. Light+ Water LT	1141	7.02	1198	7.37	1258	7.74
	H T							
	c)	3-Phase, 11KV	13	4.15	14	4.36	15	4.57
	d)	3-Phase, 33KV	3	0.01	3	0.01	3	0.01
	Pub. Light+ Water HT		16	4.16	17	4.37	18	4.58
	Pub. Light+ Water LT & HT		1157	11.18	1215	11.74	1276	12.32
4	Agricultural Consumers							
	LT							

	a)	1-Phase, 230 Volt						
	b)	3-Phase, 400 Volt	2	0.00	2	0.00	2	0.00
		Agri Total LT	2	0	2	0	2	0
	H T							
	c)	3-Phase, 11KV						
	d)	3-Phase, 33KV						
	Agri Total HT		0	0	0	0	0	0
	Agri Total LT+HT		2	0	2	0	2	0
5	Industrial Consumers							
	LT							
	a)	1-Phase, 230 Volt	142	55.19	149	57.94	156	60.84
	b)	3-Phase, 400 Volt	129	1.41	135	1.48	142	1.56
	Ind. LT Total		271	56.6	284	59.42	298	62.4
	H T							
	c)	3-Phase, 11KV	17	2.01	18	2.11	19	2.22
	d)	3-Phase, 33KV	4	9.32	4	9.79	4	10.28
		3-Phase, 132KV		11.27		11.83		12.43
	Ind. HT Total		21	11.33	22	11.9	23	12.5
		Ind. Total LT+ HT	292	67.93	306	71.32	321	74.9
6	Bulk Mixed Consumers							

	a)	3-Phase, 11KV	125	59.97	131	62.97	138	66.12
	b)	3-Phase, 33KV	26	2.74	27	2.88	28	3.02
	c)	3-Phase, 132 KV	11	0.92	12	0.97	13	1.01
	Total Bulk All HT		162	63.63	170	66.82	179	70.15
7	Temporary Consumer							
	a)	LT/HT	49	0.11	51	0.12	54	0.13
		G Total:-	207305	322.05	217669	338.15	228553	355.07
			207303	322.05	217667	338.16	228551	355.07

(Ref: Table: 2.2 of the Petition)

3.3. Losses : Distribution , T&D and AT&C

The distribution losses for FY 2016-17 have been shown by the Petitioner in the Petition table no. 2.4 in comparison to previous years is placed hereunder :

Table 3.3: Distribution and AT&C losses- FY 2016-17: Petitioner's Projections

Ref: Petition Table 2.4

SL No	Particulars	Calculation	Unit	Previous Year 2014-15 (Actual)	Current Year 2015-16 (Estimated)	Ensuing Year 2016-17 (Projected)
1	Generation (own as well as any other connected generation net after deducting auxiliary consumption) within area of supply of DISCOM.	A	MU	52.38	52.33	52.28

2	Input energy (metered Import) received at interface points of DISCOM network.	B	MU	673.40	622.00	622.00
3	Input energy (metered Export) by the DISCOM at interface point of DISCOM network.	C	MU	36.25	45	55
4	Total energy available for sale within the licensed area to the consumers of the DISCOM	D=A+B+C	MU	689.53	629.33	619.28
5	Energy billed to metered consumers within the licensed area of the DISCOM	E	MU	322.05	338.15	355.06
6	Energy billed to unmetered consumers within the licensed area of the DISCOM	F	MU			
7	Total energy billed	G=E+F	MU	322.05	338.15	355.06
8	Amount billed to consumer within the licensed area of DISCOM	H	Rs. Cr	158.91	134.35	141.00
9	Amount realized by the DISCOM out of the amount Billed at H#	I	Rs. Cr	119.10	125.50	132.50
10	Collection efficiency (%) (= Revenue realized/ Amount billed)	$J=(I/H) \times 100$	%	74.95	93.42	93.93
11	Energy realized by the DISCOM	K=JXG	MU	214.37	315.89	333.51
12	Distribution Loss (%)	$L=\{(D-G)/D\} \times 100$	%	53.29	46.27	42.67
13	AT & C Loss (%)	$M=\{(D-K)/D\} \times 100$		65.00	49.81	46.15

3.4. Energy Requirements of the Petitioner

Based on the energy requirements to meet the needs of Power for various categories of the Customers, sale of surplus power and adjustment of UI import and export the Petitioner has projected (Petition Table no 2.5) the energy requirements as under:

Table 3.4: Profile of Energy Sales in MUs for FY 2016-17- Petitioner's Submission

Ref: Petition Table no 2.5

SL No.	Item	Previous year 2014-15 - actual	Current Year 2015-16 - estimated	Ensuing year 2016-17 – projected
A	ENERGY REQUIREMENT			
1	Energy sales within the State	322.05	338.15	355.06
2	Sales outside State (Bilateral+UI)	36.25	45.00	55.00
3	TOTAL SALES	358.30	383.15	410.06
4	Distribution Losses			
I)	MU	367.48	291.18	264.22
II	%	53.29	46.27	42.67
5	Total energy requirement (3+4)	725.78	674.33	674.28
B	ENERGY AVAILABILITY			
1	Power Purchase from			
	a) DHPD	52.03	52.03	52.03
	b) Central Stations	391.33	390.00	390.00
	c) Deviation Import(UI)	150.12	100.00	100.00
2	Net Power Purchase (a+b+c)	593.48	542.03	542.03
3	Free Power from RHEP, NEEPCO	131.95	132.00	132.00
4	From D G Set	0.35	0.30	0.25
5	Total energy availability	725.78	674.33	674.28

4 Proceedings: Public-Hearing and SAC Meeting

4.1. Public Response to the Petition

On admitting the ARR and Tariff Petition of DoP, AP for FY 2016-17, the Commission directed the DoP, AP to make available, the copies of Petition to general public, post the Petition on their website and also invite comments/objections from various stakeholders by publishing the petition in abridged form in local newspapers.

The notification for Public Notice of proposed ARR & Tariff proposal for FY 2016-17 was published by AP DoP in the following newspapers.

Sl.	Name of the newspaper	Language	Date of publication
1	Arunachal Times	English	24-12-2015
2	Dawnlit Post	English	24-12-2015

Through the public notice, the stakeholders/public were invited to furnish their objections and suggestions on the petition on or before 15-01-2016.

The Commission did not receive any objection/suggestion and hence the Commission did not feel the necessity of conducting the Public Hearing.

5. True Up, Review & Analysis of ARR & Tariff Petition

Analysis of the ARR & Tariff Petition for FY 2016-17 is undertaken by the Commission after the True up for FY 2013-14's ARR and Review of ARR of FY 2014-15 as under:

5.1 Approach for True-up for FY 2013-14

While the petitioner has not specifically requested for True up of FY 2013-14, the Commission on the basis of the data available with the Commission that was submitted as "actuals" for FY 2013-14 while filing the ARR and Tariff Petition for FY 2015-16, has undertaken True up exercise of various parameters Suo- Moto basis considering the **Multi Year Tariff Regulations- 2013 notified by APSERC on 18th October 2013** indicates the following in regard to True up:

Quote *"From the first year of the Control Period and onwards, the Petition shall comprise of: Truing Up for FY 2012-13, if any, to be carried out under Arunachal Pradesh State Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2011 and onwards in accordance with these Regulations;"* **Unquote**

Since, APDOP is currently operating as a department within the Govt. of Arunachal Pradesh, the system of account keeping is on cash receipt and expense basis i.e. proforma accounts.

The objective of the True up or Review of ARR is to reconcile the data which might reflect differently during True up / Review either due to data inaccuracies at the time of submission of Petition or any reason outside the control of the Petitioner during the period under review. This analysis prepares the Commission & the Petitioner with an objective course correction for further years.

Process of Review and Truing Up:

(1) The Commission shall undertake a review along with the next Tariff Order of the expenses and revenues approved by the Commission in the Tariff Order. While

doing so, the Commission shall consider variations between approvals and revised estimates/pre-actuals of sale of electricity, income and expenditure for the relevant year and permit necessary adjustments/ changes in case such variations are for adequate and justifiable reasons. Such an exercise shall be called 'Review'.

(2) (i) After audited accounts of a year are made available, the Commission shall undertake similar exercise as above with reference to the final actual figures as per the audited accounts. This exercise with reference to audited accounts shall be called 'Truing Up'.

(ii) The Truing Up for any year will ordinarily not be considered after more than one year of 'Review'.

(3) The revenue gap of the ensuing year shall be adjusted as a result of review and truing up exercises.

(4) While approving such expenses/revenues to be adjusted in the future years as arising out of the Review and / or Truing up exercises, the Commission may allow the carrying costs as determined by the Commission of such expenses/revenues. Carrying costs shall be limited to the interest rate approved for working capital borrowings.

(5) For any revision in approvals, the licensee would be required to satisfy the Commission that the revision is necessary due to conditions beyond its control.

Table 5.1: True Up of ARR for FY 2013-14 – Undertaken by the Commission

Sl.	Description	Unit of Measurement (UOM)	Approved by the Commission for FY 2013-14 Ref: Tariff Order FY 14 dtd 30.5.13	Reviewed by the Commission for FY 2013-14 vide Ref : Tariff Order FY 15- Table 5.2	FY2013-14 Actuals Formats Referred herein are as submitted in FY 2015-16
1.	Energy Sales within the State	MUs	301.00 Table.5.3	286.02	233.12 Format D2
2.	Total number of Consumers	Nos.	195550 (as Projected by the Petitioner)	193510	193510 Format D2 & Table 3.2 of FY 16 Petition
3.	T&D Loss	%	53% Table 5.4	59.65 %	59.65% Format D2
4.	Net Power Purchase (CGS+ APHDP+Diesel)	MUs	415.39 Table. 5.6	478.79	478.79 Format D2
5.	Total Energy Availability	MUs	640.42 Table 5.6	630.61	630.61 Format D2
6.	Amount Realized by APDOP from Tariff	Rs. Crs	117.53	-	87.05 Format D2A 94.36

Sl.	Descripti on	Unit of Measurem ent (UOM)	Approved by the Commission for FY 2013- 14 Ref: Tariff Order FY 14 dtd 30.5.13	Reviewed by the Commission for FY 2013-14 vide Ref : Tariff Order FY 15- Table 5.2	FY2013-14 Actuals Formats Referred herein are as submitted in FY 2015-16
					Table 19
7.	Cost of Power Purchase	Rs Crs	202.07	-	169.98 Format D4
8.	Fuel cost	Rs. Crs	2.14		4.75
9.	Total Revenue Requirem ents	Rs. Crs	400.10	-	908.50 Format D7
10.	Total Number of Employee s	Nos.			9961 Format 2 & in Sch 2 of the Petition
11.	Deprecati on on Assets	Rs Crs	NIL		111.61

In the above analysis, the T&D loss of 59.65 % is more than 53% approved by the Commission for the FY 2013-14. The Petitioner has not taken adequate steps to reduce the T&D by examining the health of each distribution system component. As a result of the same, the Power to be imported by the Petitioner is more than the Power Approved at same T&D loss levels.

The actual Energy sales (233 MUs) within the territory is much less than the approved Energy Sales 301MUs for the FY 2013-14.

The Energy sales requirement accounting for T&D losses, as approved is 301MUs/ (1-53%) = 640.43 MUs is higher than actuals energy requirement of APDoP at actual sales and T&D loss level $233.12 / (1 - 59.65\%) = 577.75$ MUs. The lower power requirements at the periphery of APDoP mean lesser subsidy to be provided by the Government. The higher T&D loss is however, non-productive waste of Power (Ref. Sl 1&3) of the above table. The lower T&D losses will save the exchequer of Govt. of Arunachal Pradesh and enable development of Energy Sector to be healthier which in turn will generate economic activities in the State of Arunachal Pradesh.

The figures at Sl. 4 also reflect that more power had to be purchased than approved, but it does not reflect on the Consumer Tariff as inefficiencies in the distribution system are met through Govt. subsidy.

No other parameter of the ARR has been noticed to have impacted the ARR for FY 2013-14 and there is no ARR gap or surplus required to be carried forward to further years. As such no impact is required to be passed on to the Consumers due to True Up by the Commission for the FY 2013-14. No amount of ARR is generated for adjustment as Regulatory Asset or surplus for FY 2013-14 or later years.

5.2 Approach for Review of ARR for FY 2014-15

While, the Petitioner has not specifically requested for the Review of FY 2014-15 also, similar to no request received from the Petitioner for the True up of FY 2013-14 , the Commission, on the basis of the data submitted by petitioner, has reviewed ARR for FY 2014-15 on Suo Moto, vis-a-vis determined earlier by the Commission in its ARR order dated 3 June 2014. The Review of ARR for FY 2014-15

has been carried out as per the provisions of Terms and Conditions for Determining of Tariff and Formats for Tariff Filing Regulations-2011, notified on 26th Dec. 2011, as indicated under the para of “True Up for FY 2013-14”.

In view of the above, the Commission has reviewed the variations between approvals and

actuals of sale of electricity, income and expenditure for FY 2014-15 and permitted necessary adjustments in cases where variations seemed to be for reasonable and justifiable reasons. The data for FY 2014-15 has been submitted by the Petitioner in the Petition for FY 2016-17 for ARR and Tariff

The analysis & treatment of each component based on the revised estimates is provided in hereunder:

Table 5.2: Commission’s Review of ARR for FY 2014-15

Sl.	Description	Unit of Measure ment- UOM	Approved by the Commission as per Tariff Order dtd. 3 June 2014	FY2014-15 Actuals - Ref Tariff Petition for FY 2016-17	% age Change from Approval
a	b	c	d	e	f
1	Energy Sales within the State	MUs	262	322.05	122.92%
			Table 5.3	Table 2.2	
2	Total number of Consumers	Nos.	200703	207305	103.29%
			APDoP Projectns Table 5.1	Table 2.2	

Sl.	Description	Unit of Measure- UOM	Approved by the Commission as per Tariff Order dtd. 3 June 2014	FY2014-15 Actuals - Ref Tariff Petition for FY 2016-17	% age Change from Approval
a	b	c	d	e	f
3	T&D Loss	%	43%	53.29%	123.92%
			Table 5.6	Table 2.4	
4	Total Energy Availability	MUs	485.2	725.78	149.58%
			Table 5.6	Table 2.5	
5	State Share / Allocation in MWs	MW		137.84	
				Table 1.1	
6	Capital Expenditure & Capitalization	Rs. Crs	Not approved as no details were available	Not furnished	
7	Power Purchase from CGS	MUs	420.63	523.28	124.40%

Sl.	Description	Unit of Measure ment- UOM	Approved by the Commission as per Tariff Order dtd. 3 June 2014	FY2014-15 Actuals - Ref Tariff Petition for FY 2016-17	% age Change from Approval
a	b	c	d	e	f
			Order Table 5.6		
8	Operation & Maintenance Expenses	Rs. Crs	30.8	22	71.43%
			Table 5.24	Table 2.9	
9	Employee Cost	Rs. Crs	170.23	179.50	105.5%
				Table 2.11& 4.1	
10	Admn & Gen. Expenses	Rs. Crs	2.00	1.00	50.00%
			Para 5.10.2	Table 2.11	
11	R&M Expenses	Rs. Crs	26.70	22.00	82.4%
12	Interest & Finance Charges	Rs. Crs	Nil- Order Para 5.11	0.00	
			Para 5.11	Table 2.11	

Sl.	Description	Unit of Measure- UOM	Approved by the Commission as per Tariff Order dtd. 3 June 2014	FY2014-15 Actuals - Ref Tariff Petition for FY 2016-17	% age Change from Approval
a	b	c	d	e	f
13	Interest on working Capital	Rs. Crs	8.04	0.00	
			Table 5.19	Table 2.11	
14	Revenue from Tariff	Rs. Crs	107.22	127.95	119.3%
			Table 5.22	Table 4.1	
15	Total Power Purchase Cost	Rs. Crs	143.23	191.68	133.82%
			Table 5.20	Table 4.1	
16	Fuel cost	Rs. Crs	1.26	4.5	357.14%
			Table 5.24	Table 2.11	
17	Total Revenue Requirements	Rs. Crs	355.20	398.68	112.24%
			Table 5.20	Table 2.11	
18	Total Number of Employees	Nos.	-	9961	-
				Table 2.7	
19	Deprecation on Assets	Rs Crs	Nil – details absent, Para 5.10 of the Tariff order	0.00	
			Table 5.20	Table 4.10	

In the Review Process of ARR for FY 2014-15, some deviations have been noticed and Commission's observations have been given in the column "g" of the above table. The deviations have been met from the treasury of Arunachal Pradesh Government, thus leaving no impact that is required to be passed on to the Consumers for FY 2016-17 due to these deviations. No additional Revenue gap or any surplus is generated for carrying these forward for adjustment in future years or converting these to Regulatory Assets.

The other parameters as approved by the Commission are required to be maintained to achieve optimal performance by APDoP.

The APDoP has to maintain a check on these deviations and put in efforts to get the auditing of the accounts urgently for proper True up before next Petition of ARR & Tariff for FY 2017-18.

5.3 Approach for Determination of ARR & Retail Tariff for FY 2016-17

In this regard various provisions of the APSERC Tariff Regulations pertaining to business of an integrated utility are relevant and Commission is guided by the principles contained in Section 61 of the Act among other things to examine the Sales forecast, Power purchase quantum, Self-generation and other income & expenditure.

The Commission, while determining the tariff is guided by the principles contained in Section 61 of the Act, namely

- a) The principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees;

- b) The generation, transmission, distribution and supply of electricity are conducted on commercial principles;
- c) The factors which would encourage competition, efficiency, economical use of the resources, good performance and optimum investments;
- d) Safeguarding of consumers' interest and at the same time, recovery of the cost of electricity in a reasonable manner;
- e) The principles rewarding efficiency in performance;
- f) That the tariff progressively reflects the cost of supply of electricity and also, reduces and eliminates cross-subsidies within the period to be specified by the Appropriate Commission;
- g) The promotion of co-generation and generation of electricity from renewable sources of energy;
- h) The National Electricity Policy and tariff policy;
- i) In addition to above the Commission has to take into account the Renewable Energy purchase obligations notified by the Commission vide APSERC's Regulation No. 8, Dtd.11/4/2012 and as amended in 2016.
- j) Relevant directions given by the Hon'ble APTEL in the judgment in O.P. no. 1 of 2011.
- k) The ARR and tariff petition for the FY 2016-17 filed by DOP, AP was incomplete, as many of the specified formats required under APSERC (Terms and Conditions for determination of tariff) Regulations, 2011 were not submitted.

5.3.1. Consumer Base & Energy Sales- FY 2016-17

Proper estimation of category-wise sales is essential to determine the quantum of Power Purchase and the likely assessment of revenue. This section examines the Customer base, category-wise sales projected by the DOP, AP in their petition for assessment of ARR for FY 2016-17 for various Consumer Categories.

5.3.1.i. Customer Base & Energy Sales

DOP, AP has projected to serve 2,28,553 Consumers in FY 2016-17 in its licensed area and the consumers are categorized as under.

DOP, AP serves the consumers at different voltages at which the consumers avail supply. Commission directs the DOP, AP to segregate the voltage wise connected load of consumers in the categories of Domestic with separate sub-category for KJ & BPL and Bulk supply, water works and General purpose categories, since these consumers would be subsidizing the KJ & BPL and Irrigation and Agriculture Consumers, in the tariff rates that progressively may emerge at cost to serve as per the NTP. DOP, AP has furnished growth of consumers and sales for the years FY 2014-15 to FY 2016-17 without furnishing the connected load as depicted in the Tables below.

Table 5.3: Category wise number of consumers energy sale projection

SL No	Category of Consumers	Previous Year (Actuals) 2014-15		Current Year (Estimated) 2015-16		Ensuing Year (Projected) 2016-17	
		Consumers at the end of the year (Nos)	Energy Sale/ Demand (MUs)	Consumers at the end of the year (Nos)	Energy Sale/ Demand (MUs)	Consumers at the end of the year (Nos)	Energy Sale/ Demand (MUs)
1	Non Commercial Consumers (Domestic)						

	LT							
	a)	1-Phase, 230 Volt	131339	96.73	137906	101.57	144801	106.64
	b)	3-Phase, 400 Volt	1819	16.14	1910	16.95	2006	17.79
	H T							
	c)	3-Phase, 11KV	28	0.8	29	0.84	30	0.88
	d)	3-Phase, 33KV						
	e)	KJP & BPL connection	52971	20.63	55620	21.66	58401	22.74
2	Commercial Consumers (Non-Industrial)							
	LT							
	a)	1-Phase, 230 Volt	18370	17.68	19289	18.56	20253	19.49
	b)	3-Phase, 400 Volt	1024	13.1	1075	13.76	1129	14.44
	H T							
	c)	3-Phase, 11KV	88	2.79	92	2.93	97	3.08
	d)	3-Phase, 33KV	2	0.06	2	0.06	2	0.07
3	Public Lighting and Water Supply Consumers							
	LT							
	a)	1-Phase, 230 Volt	1019	5.09	1070	5.34	1124	5.61
	b)	3-Phase, 400 Volt	122	1.93	128	2.03	134	2.13
	H T							
	c)	3-Phase, 11KV	13	4.15	14	4.36	15	4.58
	d)	3-Phase, 33KV	3	0.01	3	0.01	3	0.01
4	Agricultural Consumers							
	LT							

	a)	1-Phase, 230 Volt						
	b)	3-Phase, 400 Volt	2	0.00	2	0.00	2	0.00
	H T							
	c)	3-Phase, 11KV						
	d)	3-Phase, 33KV						
5	Industrial Consumers							
	LT							
	a)	1-Phase, 230 Volt	142	55.19	149	57.95	156	60.85
	b)	3-Phase, 400 Volt	129	1.41	135	1.48	142	1.55
	H T							
	c)	3-Phase, 11KV	17	2.01	18	2.11	19	2.22
	d)	3-Phase, 33KV	4	9.32	4	9.79	4	10.28
6	Bulk Mixed Consumers							
	a)	3-Phase, 11KV	125	59.97	131	62.97	138	66.12
	b)	3-Phase, 33KV	26	2.74	27	2.88	28	3.02
	c)	3-Phase, 132 KV	11	0.92	12	0.97	13	1.01
7	Temporary Consumer							
	a)	LT/HT	49	0.11	51	0.12	54	0.13
		G Total:-	207305	322.05	217669	338.15	228553	355.07

Commission's Analysis of Consumer's Base & Energy Sales

The numbers of Consumers in various categories have shown increase from FY 2014-15 (Actual) to FY 2015-16 (estimated) and to FY 2016-17 also (on projected basis).

The Commission accepts the number of consumers and category wise sales as projected above by the APDOP, with the directions to DoPAP for segregating the voltage wise load of different categories of consumers.

5.3.2. Distribution Losses

Petitioner's Submission:

DoP, AP has filed the actual distribution losses for FY 2014-15 at 53.29% and estimated for 2015-16 at 46.27% and projected for the FY 2016-17 at 42.67% as per Table 2.4 of the petition.

Table 5.4: Distribution and AT &C loss projection of the Petitioner.

S L N o	Particulars	Calculati on	Unit	Previous Year 2014-15 (Actual)	Current Year 2015- 16 (Estimated)	Ensuing Year 2016-17 (Projected)
1	Generation (own as well as any other connected generation net after deducting auxiliary consumption) within area of supply of DISCOM.	A	MU	52.38	52.33	52.28
2	Input energy (metered Import) received at interface points of DISCOM network.	B	MU	673.40	622.00	622.00
3	Input energy (metered Export) by the DISCOM at interface point of DISCOM network.	C	MU	36.25	45	55
4	Total energy available for sale within the licensed area to the consumers of the DISCOM	$D=A+B+C$	MU	689.53	629.33	619.28
5	Energy billed to metered consumers within the licensed area of the DISCOM	E	MU	322.05	338.15	355.06
6	Energy billed to unmetered consumers within the licensed area of the DISCOM	F	MU			

7	Total energy billed	$G=E+F$	MU	322.05	338.15	355.06
8	Amount billed to consumer within the licensed area of DISCOM	H	Rs. Cr	158.91	134.35	141.00
9	Amount realized by the DISCOM out of the amount Billed at H#	I	Rs. Cr	119.10	125.50	132.50
10	Collection efficiency (%) (= Revenue realized/ Amount billed)	$J=(I/H) \times 100$	%	74.95	93.42	93.93
11	Energy realized by the DISCOM	$K=J \times G$	MU	214.37	315.89	333.51
12	Distribution Loss (%)	$L=\{(D-G)/D\} \times 100$	%	53.29	46.27	42.67
13	AT & C Loss (%)	$M=\{(D-K)/D\} \times 100$		65.00	49.81	46.15

Commission is aware that the distribution network of Arunachal Pradesh is spread over wide geographical area serving widely spread domestic consumers (64.25% of Consumers), with 35.30 % of the energy sales to this category and about 6.40 % energy sales to BPL(Kutir Jyoti) with a Consumer base of 25.55%. These Consumers are at LT voltage level, the reduction of distribution losses has been low.

The T&D losses were approved at 53% for FY 2013-14 as per Tariff Order dated 30.05.2013

Further the Commission in its ARR & Tariff order dated 30-05-2013 for FY 2013-14 has approved T&D losses for FY 2014-15 & FY 2015-16 at 50% and 47% respectively. After deducting 4% towards transmission losses, the distribution losses for FY 2014-15 shall be 46% and 43% for FY 2015-16.

The Commission had advised APDOP in regard to T&D losses as a directive under para 6.2.5 of the order dated 03.06.2014

Quote “APDOP should prepare a ‘Road Map’ on priority for reduction of AT&C losses indicating the measures proposed to be implemented to achieve the reduction for next three years including the cost involvement and the sources identified for funding.” **Unquote.**

APDOP has not informed the Commission in regards to steps taken in this direction.

Further, the technical and commercial losses are not segregated by the DoP. They should analyze the reasons for high distribution losses for each segment and effective measures are required be undertaken to reduce the losses by proper accounting of energy sales, conducting voltage-wise energy audit, by providing meters on all feeders etc. DOP, AP should also take action to arrest pilferage of energy, replacement of defective meters/ stopped meters, electro-mechanical meters with automatic meters. In addition to above automatic meters to all un-metered connections should also be provided at the earliest in a time bound manner.

With the above directions the Commission sets the distribution losses at 40% for the FY 2016-17, in accordance to the provisions of Regulation 71(a) of the Tariff Regulations-2011 of APSERC.

5.3.3. Energy requirement & Energy Balance for FY 2016-17

APDOP has projected energy requirements of 674.28 MUs vide Table 2.5 of the petition for the FY 2016-17 as depicted below:

Table 5.5: Energy Requirement in MUs for FY 2016-17 of Petitioner’s Projections

SL No.	Item	Previous year 2014-15 (actual)	Current Year 2015-16 (estimated)	Ensuing year 2016-17 (projected)
A	ENERGY REQUIREMENT			
1	Energy sales within the State	322.05	338.15	355.06
2	Sales outside State (Bilateral+UI)	36.25	45.00	55.00

3	TOTAL SALES	358.30	383.15	410.06
4	Distribution Losses			
I)	MU	367.48	291.18	264.22
II)	%	53.29	46.27	42.67
5	Total energy requirement (3+4)	725.78	674.33	674.28
B	ENERGY AVAILABILITY			
1	Power Purchase from			
	a) DHPD	52.03	52.03	52.03
	b) Central Stations	391.33	390.00	390.00
	c) Deviation Import(UI)	150.12	100.00	100.00
2	Net Power Purchase (a+b+c)	593.48	542.03	542.03
3	Free Power from RHEP, NEEPCO	131.95	132.00	132.00
4	From D G Set	0.35	0.30	0.25
5	Total energy availability	725.78	674.33	674.28

Commission's Analysis of Energy Requirements

The Commission has considered the projected power purchase for the FY 2016-17 from central generating stations wheeled through PGCIL Network and assessed total power availability for sale in the licensed area including the projected free power as per the energy balance given in the Table below.

Table 5.6 Energy Balance: FY 2016-17- Approved by the Commission

Sl	Energy Requirements vs. Energy Availability			
A	Energy Requirements			MUs
1	Energy required for sales inside the State			355.06
2	Distribution Losses	40%		
3	Energy requirement with Distribution losses		355.06/(1-0.40)	591.77
4	Distribution losses in MUs (Sl.3-1)			236.71
B	Energy Availability			
5	Diesel Generation			0.25
6	Energy Sourced from AP DHPD		52.03	
7	Transmission Losses with in the State in %		4%	
8	Intrastate Transmission Losses in MUs		2.08	
9	Usable Energy Sourced from AP DHPD (Sl.6-Sl8)			49.95
10	Energy Required at Injection point in Arunachal			541.57

	Pradesh from Central Generating Stations (Sl.3-sl 5-Sl.9)			
11	Transmission Losses with in the State in %		4%	
12	Energy from Central Generating Stations to be received by the DoP, AP for Distribution within the State		541.57/(1-4% as per Sl. 11)	564.14
13	Inter State Transmission Losses in PGCIL network		3.48 %	
14	Energy to be exported by the Central Generating Station		564.14/ (1-3.48% as per Sl. 13)	584.48
15	Total Energy Requirements Sl.5 + Sl. 6+ Sl 14 for sale within the State			636.76
16	Sale of surplus power outside the state			55.00
17	Grand total energy requirement(sl. No. 15+ sl.no.16)			691.76
18	Total energy to be sourced from CGS(Sl.no.14+Sl.no 16)			639.48

Commission's Approval of Energy Requirements

Based on the above analysis the Commission approves energy requirement at 691.76 MU for FY 2016-17.

5.3.4.Cost Comparison of Power Purchase FY 2016-17 vs. FY 2015-16

Before analyzing the Power Purchase Cost projected by APDoP, the Costs of Purchase in FY 2015-16 were compared with Costs projected now. The Comparison is as under:

Table 5.7 Power Purchase Cost comparison: FY 2015-16 Vs. FY 2014-15

Sl.	Source	Cost (Rs./ Kwh approved by the Commission for FY 2016-17	Cost (Rs./kWh) FY 2015-16
1	Loktak	3.62	4.23
2	Kahndong	2.34	3.10
3	Doyang	3.25	3.16
4	Kopili-I	1.11	1.19

5	Kopili-II	1.70	2.22
6	Ranganadi	2.97	2.39
7	AGTPP (Tripura)	2.97	4.16
8	AGBPP	5.03	4.20
9	Farakka	4.24	4.64
10	Kahalgaon	4.92	4.41
11	Talcher	2.61	2.75
12	ONGC (Palatana)	3.02	2.67

Commission's Analysis:

The Commission notes that the rates at which Power is proposed to be purchased varies from previous years as above. The APDoP shall have a recheck on the Rates at which Power is proposed to be purchased. The Commission shall examine these during the review process of ARR for FY 2016-17 along with ARR for FY 2017-18.

5.3.5. Power Purchase Cost FY 2016-17: Petitioner's Projections

APDOP has projected power purchase cost at Rs. 161.96 crore for 491.33 MUs to be purchased from CGS including U / Purchase of 100 MU. APDOP has to meet PGCIL charges at actuals. Summing up of the purchase cost APDOP has claimed Rs.178.75 crore in ARR for FY 2016-17. The power drawn from AP DHPD has been shown to be purchased @Rs. 2.09/Unit amounting to a total of Rs. 10.87 Crore.

Power Purchase Cost: FY 2016-17 Commission's Approval

**Table 5.8: Power Purchase cost Commission's Approval for FY 2016-17
(Based on Petition table 2.6)**

Sl. No.	Source	Cost (Rs./KWH)	Power Purchase (MUs)	Cost Rs. (crore)	Power Purchase Quantum : Commission's Approval	Cost Rs. (crore) : Commission's Approval
			Projected		Approved	
NHPC						
1	Loktak	3.62	17.56	6.36	17.56	6.36
NEEPCO						
2	Kahndong	2.34	3.66	0.86	3.66	0.86
3	Doyang	3.25	10.74	3.49	10.74	3.49

Sl. No.	Source	Cost (Rs./KWH)	Power Purchase (MUs)	Cost Rs. (crore)	Power Purchase Quantum : Commission's Approval	Cost Rs. (crore) : Commission's Approval
			Projected		Approved	
4	Kopili-I	1.11	27.80	3.09	27.80	3.09
5	Kopili-II	1.70	4.57	0.78	4.57	0.78
6	Ranganadi	2.97	71.58	21.27	71.58	21.27
7	AGTPP (Tripura)	2.97	37.61	11.18	37.61	11.18
8	AGBPP	5.03	97.05	48.77	97.05	48.77
NTPC						
9	Farakka	4.24	21.22	9.00	21.22	9.00
10	Kahalgaoon	4.92	11.71	5.76	11.71	5.76
11	Talcher	2.61	13.89	3.63	13.89	3.63
12	ONGC (Palatana)	3.02	73.94	22.37	73.94	22.37
13	UI/Trading (-)	2.54	100.00	25.40	116.20	29.51
14	PGCIL charges (CGS +UI+ Free Power)	0.45	131.95	5.94	639.48	28.78
15	Provision of Power Purchase from DHPD	2.09	52.03	10.87	52.03	12.80
16	Grand Total		675.31	178.75	691.51	207.65

Commission's Approval towards Power Purchase Cost

The above amount of Rs 207.65 Crs towards purchase of 559.56 MU during FY 2016-17 is approved by the Commission.

5.3.6. Aggregate Revenue Requirement (ARR) for FY 2016-17

The AP DOP in its petition for FY 2016-17 has projected a total revenue requirement of Rs. 406.48 Crore for 2016-17 as mentioned hereunder :

Table 5.9: Aggregate Revenue Requirement for FY 2016-17-AP DOP Projections

Sl.	Item of expense	Petition for Year 2016-17 Projected (Crore)
a	b	e
1.	Cost of power Purchase	178.75

Sl.	Item of expense	Petition for Year 2016-17 Projected (Crore)
a	b	e
2.	Fuel Cost (Diesel for Power Generation)	4.87
3.	Employee costs	197.50
4.	R&M expenses	24.26
5.	Administration and general expenses	1.10
6.	Interest on Working Capital	Nil
7.	Depreciation	Nil
8.	Interest charges (i/c interest on working capital)	Nil
9.	Return on NFA /Equity	Nil
10.	Provision for Bad Debit	Nil
11.	Total revenue Requirement	406.48
12.	Less: non-tariff income	3.33
13.	Net revenue requirement (11-12)	403.15
14.	Revenue Billed	141.06
15.	Revenue from surplus sale of Power	14.65
16.	Revenue Gap (13-14-15)	247.44
17.	Any other Revenue Gap / Previous Revenue Gap	0.00
18.	Total revenue gap (16+17)	247.44
19.	Revenue surplus carried over	0.00
20.	Additional revenue from proposed tariff	0.00
21.	Regulatory asset	0.00
22.	Energy sales (MU)	400.06

Average Cost of Power Supply (Sl.13/ Sl.22) : Rs. 10.08 / kWh

Keeping the approach of determining the Annual Revenue requirements for FY 2016-17 as per guiding principles defined in para 5.3 above, each element of the ARR projected by DoP,AP has been analyzed by the Commission in the following paras.

5.3.7 Fuel Cost for Power Generation (Diesel Power)

DOP, AP has claimed Rs. 4.87 crores towards Fuel Cost for an estimated 0.25 MU generation (Petition table 2.5) during the FY 2016-17 by the diesel generating plant in emergencies.

Commission's Analysis

The Commission approves fuel cost at Rs. 0.79 crore only for FY 2016-17 for a projected generation of 0.25 MU @ Rs. 31.50 per unit as allowed last year against Rs. 194.80 per unit for 0.25 MU as projected by the DOP which is not only exorbitant but unbelievable. This subject to final approval during True up process on submission of plant performance data.

5.3.8 Employees' Cost- FY 2016-17- Petitioner's Submission

The Petitioner has submitted Employees' Costs towards Salaries and Allowances, as in the following table

Table 5.10: Employees' Costs Petitioner Submission FY 2015- 16(in Crore)
(Based on Petition Table 2.8)

SI	Particulars	FY 2014-15 Actuals	FY 2015-16 Estimated	FY 2016-17 Projected
1	Salaries & Allowances	179.50	188.50	197.50

Commission's Approval of Employees' Costs:

Rs. 197.50 Crs. projection of Employees' expenses for FY 2016-17 is reasonable and approved by the Commission.

5.3.9 Repair & Maintenance Expenses: FY 2016-17

Table 5.11: Repair & Maintenance Expenses: FY 2016-17 Petitioner's Projections in Rs. Crs. (Based on Table 2.9)

SI	Particulars	FY 2014-15 Actuals	FY 2015-16 Estimated	FY 2016-17 Projected
1	Maintenance of Assets	22.00	23.10	24.26

Commission Approval of Repair & Maintenance

The Commission finds Rs. 24.26 crore towards Projected amount for R&M expenses for the FY 2016-17 as reasonable and approves the same.

5.3.10 Administrative & General (A&G) Expenses- FY 2016-17

Table 5.12: A &G Expenses for FY 2016-17 : Petitioner's Projections

Rs. Crs.

SI	Particulars	FY 2014-15 Actuals	FY 2015-16 Estimated	FY 2016-17 Projected
1	Total Administrative & General expenses	1.00	1.05	1.10

Commission's Approval of Administrative and General Expenses

An amount of Rs. 1.10 Crs projected by the Petitioner towards Administrative & General Expenses for FY 2016-17 is found reasonable by the Commission and accordingly the amount is approved by the Commission towards this head.

5.3.11 Summary of Operations & Maintenance(O&M) Cost

The O&M expenses worked out above are summarized as here under:

Table 5.13: O&M Expenses summarized for FY 2016-17

And Comparison with Previous Years – Commission's Analysis

SI	Particulars	FY 2016-17 Projected	Ref. Table of this order
1	Employee Cost Rs. Crs.	197.50	5.10
2	Repairs and Maintenance Rs. Crs	24.26	5.11
3	Administration and General Expenses Rs. Crs	1.10	5.12
	Total O&M expenses Rs. Crs	222.86	5.13

Commission's Approval for Operation & Maintenance:

Commission finds Rs. 222.86 crore projections of O&M expenses for FY 2016-17 is reasonable and approves the amount of Rs. 222.86 Crs.

5.3.12 Depreciation - FY 2016-17

DOP, AP has not claimed any amount towards depreciation for FY 2016-17 which is accepted by the Commission.

5.3.13 Interest on loans & Finance Charges for FY 2016-17

DoP, AP has not claimed any interest & finance charges for 2016-17 which is accepted by the Commission.

5.3.14 Interest on Working Capital-FY 2016-17

DoP, AP has not projected and claimed any interest on working capital which is accepted by the Commission.

5.3.15 Return on equity

DOP, AP has not claimed any amount for Return on Equity the FY 2016-17 which is accepted by the Commission.

5.3.16 Provision for Bad and Doubtful Debts.

DOP, AP has not made any provision for Bad and Doubtful Debts for the FY 2016-17 which is accepted by the Commission.

5.3.17 Renewable Power Purchase Obligations- Compliance

Deptt. of Hydro Power Development (DHPD) of Arunachal Pradesh has number of hydro stations with a rating of < 25 MW that come under Renewable Energy Compliance. The DOP is drawing the 100% power generated by these small/mini/micro hydro stations which is enough to meet the Renewable Energy Compliance for non-Solar RPOs as shown in the table below as per the Regulations dated 11th April 2012 for Renewable Power Purchase Obligations and its Compliance Regulation 2012 as defined for FY 2012-13 onwards as under:

Table 5.14: RPPO- Financial Provisions by the Commission

Sl	Year	Minimum Quantum of purchase (in %) from renewable sources (in terms of energy in kWh) of total consumption		
a	b	c	d	e
		Total	Non Solar	Solar
1	2012-13	4.2%	4.1%	0.1%
2	2013-14	5.6%	5.45%	0.15%
3	2014-15	7.0%	6.8%	0.20%
4	2015-16	7.0%	6.8%	0.20%

The APDoP has however not been able to fulfill the Renewable Energy Compliance Solar power which is getting accumulated since FY 2012-13.

Commission's Analysis in respect of RPO Compliance

The Commission suo-moto allows under this order in the ARR, a provision of Rs. 4.198 Crore for purchase of Solar RECs at the forbearance price fixed by CERC to meet the previous years' RPO Compliance and at Floor price for RPO Compliance of FY 2016-17.

5.3.18 Provision in ARR for Solar RPO Compliance.

Table 5.15: Calculation for Solar RPO Compliance- Commission's analysis

FY	Units Consumed MUs	Solar RPO %	RPOs in MUs	Rs / kWh	Amount in Rs Crs.
2012-13	645.55	0.10%	0.646	5.80	0.375
2013-14	630.61	0.15%	0.946	5.80	0.549
2014-15	725.78	0.20%	1.452	5.80	0.842
2015-16	674.33	0.20%	1.349	5.80	0.782
2016-17	313.52	1.50%	4.700	3.50	1.650
		Total Rs. Crs			4.198

The target for Solar RPO has been fixed in terms of the provision of new Tariff Policy of Govt. of India-2016.

Commission's Approval

The Commission allows and accordingly approves the amount of Rs. 4.198 Crs for compliance of backlog of Solar RPO Compliance and for the FY 2016-17.

5.3.19 Annual License Fee for Deemed Distribution Licensee

As per the provisions of the APSERC Fee Regulations, 2011, Annual License Fee is to be paid by every licensee including the Deemed Licensee. The APDOP though a deemed distribution licensee has not paid the same for FY 2012-13, 2013-14, 2014-15 and is due for 2015-16 as well. The annual license fee for a distribution licensee including a deemed licensee as per the Regulation is 0.067 paise per unit of energy handled/to be handled in a particular year (which is including the T&D losses). The year wise energy handled by the APDOP as per the information available in Tariff Orders and Petitions of various FYs w.e.f 2012-13 onwards is as follows:

1. FY 2012-13 : 645.55 MU(Actual as per Tariff Order for 2015-16; Table 5.1)
2. FY 2013-14 : 630.61 MU(Actual as per Tariff Order for 2015-16; Table 5.8)
3. FY 2014-15 : 725.78 MU(Actual as per Tariff Petition for 2016-17; Table 2.5)
4. FY 2015-16 : 674.33 MU(Estimate as per Tariff Petition for 2016-17; Table 2.5)
5. **Total : 22676.27 MU @ 0.067 paise per unit = Rs. 0.18 Crore.**

Commission Analysis and Approval towards License Fee:

The Commission approves suo-moto, a provision of Rs. 0.18 Cr. in the ARR.

5.3.20 Non-Tariff Income

DOP, AP has estimated Rs. 3.33 crore towards Non-Tariff Income for the FY 2016-17 which the Commission considers reasonable and accepts it.

5.3.21 Capital Investment

No amount has been projected by the Petitioner and hence no amount is

approved by the Commission for making any requirements for Capitalization / Interest towards Capital Investment on the ARR for FY 2016-17.

5.3.22 Investments for Training & Safety of Personnel of APDoP

The Commission also lays stress on improving the Skills and multiskilling of its manpower as well as the investment on the safety harness for the manpower of DoP, AP. The Commission makes a provision of Rs 0.75 Crs. in the ARR with a directive to utilize the amount effectively.

5.3.23 Estimated Revenue at Existing & Proposed tariffs for LT and HT Category

The Commission has accepted the Petitioner's estimated revenue from sale of power within the state at existing tariff which worked out to **Rs. 141.06 crores**.

The Petitioner has proposed an increase in tariff for Industrial Category Consumers and Consumers seeking Temporary Supply by Rs. 0.10 per unit and Rs. 0.15 per unit respectively. Since there has not been any increase in tariff for any category of consumers over the last two years, the above proposal of the DOP for increasing the tariff for Industrial category and for Temporary supply is accepted by the Commission. It is also worth while to mention here that there has not been any objection from any quarter about this.

This little increase in tariff will result in increase in revenue of the DOP by Rs. 0.87 Crore and the expected total revenue collection during 2016-17 shall be Rs. 141.93 Crore.

5.3.24 ARR for 2016-17 – Commission's Approval

The Commission has analyzed and approved amounts against various heads covering all the elements of ARR projected by the Petitioner for FY 2016-17. The Commission's approval as for each element is summarized as under. During Review Process for FY 2016-17 these amounts against each element approved by the Commission hereunder shall form the basis of actual expenses against approved expenses of ARR. The Petitioner shall ensure that the expenses are contained within these approved amounts.

Table 5.16 ARR FY 2016-17 Commission's Approval (in Crore)

SI	Item of expense	Projected by DoP for FY 2016-17	Approved by the Commission for FY 2016-17
a	b	c	d
1	Cost of power Purchase	178.75	207.65
2	Fuel Cost	4.87	0.79
3	Employee costs	197.50	197.50
4	R&M expenses	24.26	24.26
5	Administration and general expenses	1.10	1.10
6	Depreciation	0.00	0.00
7	Interest on Working Capital	0.00	0.00
8	Interest charges (including interest on working capital)	0.00	0.00
9	Return on NFA /Equity	0.00	0.00
10	Provision for Bad Debit	0.00	0.00
11	Renewable energy(solar) purchase obligation compliance	0.00	4.198
12	Annual license fee 2012-13 to 2015-16	0.00	0.18
13	Safety Harness & Skilling/Training	0.00	0.75
14	Total Revenue requirement	406.48	436.428
15	Less: non-tariff income	3.33	3.33
16	Net revenue requirement (14-15)	403.15	433.098
17	Revenue Billed	141.06	141.06
18	Revenue from surplus sale of Power	14.65	14.65
19	Additional revenue from proposed tariff	0.00	0.87
20	Gap (16-17-18-19)	247.44	276.518
21	Any other Revenue Gap	0.00	0.00
22	Total Gap (20+21)	247.44	276.518
23	Regulatory asset	0.00	0.00
24	Energy sales (MU)	400.06	400.06

Sl	Item of expense	Projected by DoP for FY 2016-17	Approved by the Commission for FY 2016-17
a	b	c	d
25	Average Cost of Supply Rs/ kWh(Sl. No. 16/Sl.No. 24)	10.08	10.83

5.3.25 Regulatory Asset

Commission's View:

As per the National Tariff Policy, where the losses incurred in the previous years that are in the nature of deferred expenditure, and that can be recovered from consumers in future, shall be allowed as Regulatory Asset by the Regulatory Commission.

The APDOP has filed the tariff petition for the fourth time after the APSERC came into existence, and the gap projected by the Department of Power cannot be recovered in the next two to three years through retail tariffs from the consumers. Even if Regulatory Asset is created, it cannot be liquidated in the next three or four years. Therefore, the Commission does not consider any Regulatory Asset for the remaining unadjusted gap. The APDOP shall improve the performance by reducing AT&C losses and exercising controls over the O&M Expenditure to make good of unadjusted revenue gap. As such, all efforts shall be made by DoP,AP to ensure the gradual reduction in net gap between the ARR and revenue and the budgetary support from the State Govt.

Thus, the Commission does not approve any Regulatory Asset to get reflected in the ARR for FY 2016-17.

6. Directives

6.1 General

Commission observes from the Petition filed by APDOP for FY 2016-17, that there are some important issues, which need immediate attention of APDOP to improve its efficiency in power delivery and reduction of costs. The Commission had also issued similar directives in its tariff order for FY 2013-14 , 2014-15 & 2015-16. The Commission is deeply concerned that the DoP AP is not taking any initiative for complying with these directives. The APDOP has not even submitted the action even once during the last three years. It is in this context, that the Commission considered it necessary that the DoP set up a Regulatory Compliance Cell manned by a team who is sensitive to understanding the Electricity Act and Electricity Regulations. Such a Regulatory Compliance cell will co-ordinate and pursue with all concerned to comply with the directives issued by the Commission from time to time particularly in its tariff orders. After all the directives issued by the Commission are in the interest of the APDOP.

APDOP shall take prompt action on the following directives and submit implementation report and the progress achieved by it in implementing the directives to the Commission from time to time.

6.2 Directives for FY 2016-17

6.2.1 Annual Accounts

APDOP is directed to prepare annual accounts, Annual Profit and Loss Account and Balance Sheet at the CE's office level and get it audited by C&AG regularly on annual basis. This directive was given in Commission's Tariff Order for FY 2013-14 and 2014-15 which has not been complied by the APDOP till now. In line with the notification of the Multi Year Tariff Regulations -2013 by the Commission, the

preparation of Annual Accounts at the level of the Head of Deptt. is mandatory.

APDOP shall maintain the books of accounts and Database as prescribed by Government of India, Ministry of Energy Department of Power in the Commercial Accounting system for State Electricity utilities. The Electricity (Supply) (Annual-Accounts) Rules 1985 and Section 185 of EA 2003. A copy of various formats shall be sent separately by the Commission to the APDOP.

6.2.2 Management Information System

APDOP shall maintain data for category wise voltage-wise connected load and sales in the format given below. APDOP shall accordingly build up the database required for regulatory process and submit the same every year in the ARR & Tariff Petition which it has not been doing for the last three year's petitions though APDOP has been committing for submittals of the same every year.

Table 6.1 MIS Format - Consumer, Connected Load, and Category wise Energy Sales

Sl.	Category of Consumers	Consumers at the end of the year (Nos.)	Connected load (KW)	Sales (MU)
LT category				
1	Domestic (DLT) Single phase			
	Domestic (DLT) Three phase			
2	Commercial (CLT) Single phase			
	Commercial (CLT) Three phase			
3	Industrial (ILT) Single phase			
	Industrial (ILT) Three phase			
4	Agriculture Single phase			
	Agriculture Three phase			

Sl.	Category of Consumers	Consumers at the end of the year (Nos.)	Connected load (KW)	Sales (MU)
5	Public Lighting (PL) Single phase			
	Public Lighting (PL) Three phase			
6	Water supply (WSLT) Single phase			
	Water supply (WSLT) Three phase			
7	General Purpose Single phase			
	General Purpose Three Phase			
8	Kutir Jyoti			
9	Temporary Single phase			
	Temporary Three phase			
HT Category				
10	Water supply (WS HT)			
11	Industrial (IHT) 11KV			
	Industrial (IHT) 33 KV			
	Industrial (IHT) 132 KV			
12	General purpose including Domestic (DHT)			
13	Bulk supply (HT) – 11 KV			
	Bulk supply (HT) – 33 KV			
	Bulk supply (HT) – 132 KV			
14	Commercial (CHT)			
15	Agriculture (HT)			

6.2.3 Fixed Assets Register

APDOP informed in its letter dated 20.03.2013 that the fixed assets register is not available. APDOP shall build up the fixed asset registers separately for Diesel Generation, Transmission and Distribution. Existing assets as on 31.3.2013 and new assets being added with new investments are to be entered in this register with quantities and costs. Format of the fixed asset register is given below. A separate register shall be maintained by the APDoP for Diesel Generators, Transmission and the Distribution Assets.

Table 6.2 Fixed Asset Register- Format

Sl	Name of the asset	Unit of Measurement	Quantity	Commissioning		Remarks
				Date	Cost	

6.2.4 Bad and Doubtful Debts

The records of bad and doubtful debts should be invariably maintained to seek approval of the Commission to withdraw the un-realizable debts for supply of energy. The DoP shall make an analysis of the existing debts and segregate the un-realizable debts.

6.2.5 T&D Losses and Conducting Energy Audit

APDOP should conduct energy audit immediately and assess losses accurately in the distribution system. For carrying out energy audit, meters are required to be provided for all the feeders at 220 KV, 132 KV, 33KV & 11 kV levels and also at all the distribution transformers on LT side. Energy audit shall help to identify high loss areas so as to take remedial measures. The DoP is also directed to compile the following information as on 31-3-2016 and submit to the Commission by 30-9-2016.

Sl. No.	Category of Feeder	Nos .of Feeders Metered	Nos. of Feeders Unmetered
1.	220 KV		
2.	132 KV		
3.	33 KV		
4.	11 KV		
5.	Distribution Transformers		

6.2.6 Energy Audit at Different Voltages

1. 220 KV system

- Energy received at incoming points of different 220 KV lines from supply sources.
- Energy received at 220 KV sub-stations within the state on 220 KV lines.
- Loss on 220KV system (MUs) (i-ii)
- % loss on 220 KV $((i-ii)/i) \times 100$

2. 132 KV system

- Energy received at incoming points through different 132 KV feeders in the State.
- Energy received at various 132/33 KV sub-stations
- Loss on 132 KV system (MUs) (i-ii)
- % losses on 132 KV system $((i-ii)/i) \times 100$

3. 33 KV system

- Energy sent out on 33 KV feeders from 220/33 KV and 132/33 KV sub stations.
- Energy received at all 33/11 KV sub-stations at 33 KV
- Loss on 33 KV (MUs) (i-ii)
- % of losses on 33 KV $((i-ii)/i) \times 100$

4. 11 KV system

- Energy sent out on 11 KV feeders from 132/11 kV sub-stations, 33/11 KV sub-stations.
- Energy recorded at all Distribution Transformers
- Loss on 11 KV system (i-ii)

- iv) % loss on 11 kV system $((i-ii)/i) \times 100$

5. LT system

- i) Energy sent out on all LT feeders
ii) Energy sold to all LT consumers
iii) Loss on LT system (i-ii)
iv) % loss on LT system $((i-ii)/i) \times 100$

Total T&D system losses for the State of Arunachal Pradesh

1. Energy Purchased (in MUs)

- i) a) From sources outside the state
b) Less Transmission Loss on PGCIL network
c) Net energy available at the periphery of the state.
- ii. a) **Energy generated and supplied by DHPD (in MUs)**
b) **Diesel Generation**
- iii) UI power utilization
iv) Total energy purchased and available = i(c) + (ii) a+b+ (iii)
2. Energy sales category wise, including sales under UI
3. T&D loss (1-2)
4. % T&D loss $((1-2)/1) \times 100$

6.2.7 100% Metering

No connection shall be given to any category of consumer without a correct automatic meter by APDOP. Defective meters, if any, in the consumer premises shall be identified and replaced on top priority with correct automatic meter.

6.2.8 Replacement of electromagnetic meters with automatic meters

Due to ageing, the existing electromagnetic meters/static might have become sluggish/defective and thus recording less consumption. All such meters, are to be replaced with automatic meters to record the consumption correctly. A report on the status of metering, type of meters provided in HT, Bulk and others high value LT installations, along with a programme for replacement of such meters with automatic Meters shall be submitted to the Commission.

6.2.9 Repairs and Maintenance

Repairs and Maintenance is a controllable item. APDOP should ensure the reduction of expenses and achieve sustainable levels compared with the value of the network in operation.

6.2.10 Filing of ARR and Tariff Petition for 2017-18

APDOP has to build up required data as directed in directives 6.2.1, 6.2.2, 6.2.3, 6.2.6 and file the ARR and Tariff Petition timely in complete shape i.e. by Nov 2016 for the FY 2017-18 as per Multi Year Tariff Regulations 2013 of the Commission.

6.2.11 Payment of Annual License Fees

In accordance to the Clause 5 (ii) of the Arunachal Pradesh State Electricity Regulatory Commission Fees Regulations-2011, all Distribution licensee and Transmission licensee including the Deemed Distribution & Transmission licensee are required to pay Annual License Fee at the rate as mentioned in Schedule of Fees, (Sl. No. II) of the above stated Regulation.

It is noted by the Commission that the APDOP has not paid the Annual License Fee since inception of the Commission. The APDOP is directed to pay the Annual License Fee for the year 2011-12, 2012-13, 2013-14, 2014-15 & 2015-16 as per the fees prescribed in the APSERC's Fee Regulation-2011 for the following entities separately before November 2015:

- i) Transmission License (Deemed)
- ii) Distribution License (Deemed)

6.2.12 Payment of Power Purchase Cost to DHPD by Petitioner

The APDOP was directed in the Commission's Tariff Order for 2013-14 to make payment to the Deptt. of Hydro Power Development (DHPD) for the power (in KWh) received by it w.e.f FY 2013-14 onwards from them at the rate determined

by the Commission from time to time. However, the Petitions filed by the APDOP for the FY 2014-15, FY 2015-16 and 2016-17 reveal that the Deptt. did not abide by the Commission's directive in this regard till now. The APDOP is directed to pay the cost of energy received from APDHPD w.e.f FY 2013-14 immediately and report compliance to the Commission.

APDOP is once again directed to make all efforts to utilize the generation of DHPD to the maximum possible extent so as to gradually reduce the dependence on external power purchases. The APDOP should in consultation with DHPD should make a road map in this regard and intimate to the Commission.

6.2.13 Reforms and Restructuring of DOP in Arunachal Pradesh

Electricity functions covering Transmission and Distribution are being performed by the Department of Power (DoP) as a Government functionary as of now. As per the provisions of the Electricity Act 2003, the functions are to be separated and entrusted to reorganized entities that have to function as independent bodies.

Department of Power is once again directed to take urgent steps for complete restructuring of the power sector in Arunachal Pradesh.

6.2.14 Collection of security deposit

Security Deposit has to be paid by all the consumers of electricity covering the period of billing cycle.

Estimated security deposit for different categories of consumers shall be calculated as per the methodology indicated by the Commission in the Arunachal Pradesh Electricity Supply Code-2013.

- (a) Payment of additional deposit,
- (b) Adjustment of excess or deficit deposit,
- (c) Payment of interest on security deposit has to be done as per the A. A.P. Electricity Supply Code-2013 notified by the Commission at the

SBI's Base Rate.

The APDOP is directed to provide the above data at (a), (b) and (c) for the FY 2013-14 , 2014-15 and 2015-16 to the Commission including the nos. of consumers covered in this exercise.

6.2.15 Introduction of Slab based tariff:

The APDOP did not conduct the techno-commercial study for assessing the feasibility of introducing Unit Consumed Slab Based Tariff w.e.f FY 2014-15 as directed by the Commission in its tariff order 2013-14 as it did not make any proposal to this effect in their Tariff Petition for the FY 2014-15, 2015-16 and 2016-17. During the last SAC Meeting held on 18-3-2015, it was decided that w.e.f 2016-17 slab based tariff shall be introduced and the APDOP shall propose the same in its tariff petition of 2016-17 which the APDOP has not done. However the APDOP is again directed to conduct this exercise at the earliest and appraise the Commission for introducing it w.e.f. FY 2017-18. Any difficulty felt by the DOP in introducing this may be shared by the DOP with the Commission.

This will have an added advantage to encourage the habit of energy conservation amongst the consumers.

6.2.16 Road Map for Smart Grid in the State:

Subsequent to the launching of Smart Grid Vision and Road Map for India by Govt. of India in August'2013, the APDOP was directed to intimate whether the APDOP has formulated any Smart Grid road map for the State of Arunachal Pradesh and the steps being taken in this regard if the road map has not been prepared as yet. The report is still awaited and should be submitted at the earliest.

6.2.17 Consumers' Grievances Redressal Forum:

APDOP is directed to constitute Consumers' Grievances' Redressal Forum immediately without any further delay in accordance to the Commission's "Redressal of Grievances & Ombudsman Regulation-2015". The Electricity Ombudsman Arunachal Pradesh in its recent judgement has also directed the APDOP to constitute the CGRF immediately.

6.2.18 Creation of Regulatory Cell:

DoP,AP shall create/constitute a Tariff Regulatory Cell (under an senior Officer not below the rank of SE) from the existing staff strength. The Cell so created shall be provided with necessary authority and resources so as to look after all the tariff and regulatory matters primarily to act on on the directives of the Commission, keep a vigil parameters approved by the Commission and also to provide correct and timely information to the Commission as well as stakeholders. The said officer shall be the primary source of all data and submissions being filed before the Commission, so as to ensure consistency and timelines of the data to be submitted and to have proper co-ordination with the Commission in the Tariff determination process.

6.2.19 Compiling of Accounts at CE's Office Level:

The APDOP is directed to compile and create all necessary data base and adopt required procedures of compiling Annual Accounts at CE's office level to ensure filing of tariff petition for the FY 2017-18 as per the Multi Year Tariff Regulations-2013.

6.2.20 Procurement of Power during Lean Hydro Season:

The APDOP is directed to explore the possibility of drawing short term and medium term power purchase agreements by open tendering i/c purchase of power through power exchanges to arrange sufficient power in advance for the consumers of the state during lean hydro season to

mitigate the grievances of the public regarding huge power cuts. This will also help to save money incurred by the govt. on power purchase because the power might be available at a cheaper cost than that the DOP is purchasing the power at present out of its allotted capacity/quota of certain Central Generating Stations and through UI. The DoP shall make the monthly/quarterly assessment of power for 2016-17 and plan power procurement accordingly in advance, to avoid load shedding in any case.

6.2.21 Power Banking arrangement during peak Hydro Season:

AP DoP vide their letter no. CE(P)/WEZ/COM-10/Tariff/2014-15/446, Dated 22-5-14 had assured the Commission at the time of finalizing the tariff petition for FY 2014-15 that it will consider the option of power banking arrangements of its surplus power during the peak hydro season with other state govt./utilities so as to mitigate the problem of power shortfall to its consumers during the lean hydro system. For FY 2015-16 also, DoP vide their letter no. CE(P)/WEZ/COM/10/14-15/106 Dtd.16-4-2015 has mentioned to consider all available options in this regard.

It is observed that the DoP hasn't taken any initiative/made any efforts in this regard as assured.

The AP DoP is directed to explore the possibility of power banking arrangements during the ensuing peak hydro season in FY 2016-17 in the interest of the electricity consumers of the state and intimate the action taken by it and its outcome to the Commission.

6.2.22 Renewable Power Purchase Obligation(Solar RPO):

As intimated by the APDOP vide their letter no. CE(P)/WEZ/SLDC/Tariff/Part-I/2013- 14/148 Dtd. 02/3/2013, they will either procure the quantity of solar power on account of FY 2012-13 in FY 2013-14 or will purchase equivalent solar REC. However, the compliance

of the same has not been submitted to the Commission as yet in spite of reminders from the Commission. The APDOP is also required to Comply with the Solar RPO for the FY 2013-14, 2014-15 and 2015-16.

The APDOP is directed to submit the report of status of complying with the Renewable Power Purchase Obligation of Solar Power for the FY 2012-13, 2013-14, 2014-15 & 2015-16 and the road map for compliance during 2016-17 to the Commission immediately in view of the revised RPO trajectory issued by the Commission in compliance of the new Tariff Policy-2016 of the Govt. of India. The DOP shall make necessary provisions in its budget for the FY 2016-17 for compliance of the RPPO and pursue the same with the Govt. at appropriate level.

6.2.23 Accounting for of Solar Energy:

AP DoP is directed to account for the solar energy received by it from the solar installations of the APEDA with mutual consultation and utilize it for fulfilling the solar RPO.

6.2.24 Providing of breakup of cost of providing Electric Plant & Meter to the premises of an Electricity Consumer:

The amount mentioned under Item No. 8 of the Schedule-II of this Tariff Order (which were adopted/retained by the APSERC in its tariff order of 2013-14) appears to be quite old. Its breakup as per Annexure-11.21 (Sl.No. F, G, H, I, J & K) of the A.P. Electricity Supply Code Regulation, Dtd.5.4.2013 be furnished by the AP DoP to the Commission at an early date.

7. Tariff Principles and Design

7.1. Background

7.1.1. The Commission in determining the Annual Revenue Requirement (ARR) of Arunachal Pradesh Department of Power, (APDOP) for the year 2016-17 and the retail tariff has been guided by the provisions of the Electricity Act, 2003, the National Tariff Policy (NTP), Regulations on Terms and Conditions of Tariff issued by the Central Electricity Regulatory Commission (CERC) and Regulations on Terms and Conditions for determination of Tariff notified by the APSERC. Section 61 of the Act lays down the broad principles, which shall guide determination of retail tariff. As per these principles the tariff should progressively reflect cost of supply and also reduce cross subsidies within the period to be specified by the Commission. The Act also lays special emphasis on safeguarding consumer interests and also requires that the costs should be recovered in a reasonable manner. The Act mandates that tariff determination should be guided by the factors, which encourage competition, efficiency, economical use of resources, good performance and optimum investment.

The National Tariff Policy (NTP) notified by Government of India provides comprehensive guidelines for determination of tariff as also working out the revenue requirement of power utilities. The Commission has endeavored to follow these guidelines as far as possible.

7.1.2. The Electricity Act, 2003 requires consideration of Multi-Year-Tariff principles and Tariff Policy mandates that the Multi-Year-Tariff (MYT) framework be adopted for determination of tariff from 1st April 2006. Though APSERC's Multi Year Tariff Regulation-2013 has been made effective w.e.f 23rd October'2013, the DOP has filed the petition in accordance to Tariff

Regulations of 2011 citing the reason of lack of requisite and reliable data required for MYT Regime. The present MIS and regulatory reporting system of the APDOP is not adequate for any such exercise at this stage. There has been no initiative taken up to assess voltage wise losses in the absence of metering of feeders, distribution transformers and consumers. Technical and commercial losses are yet to be segregated and quantified voltage wise. Moreover, the DOP has to start preparing/compiling its Annual Accounts, profit- loss accounts, balance sheet at the level of the Head of the Deptt. in the manner directed by the Commission in its directives in Chapter-6. Under these conditions it would not be practicable to implement the MYT framework this year. In view of the above and considering the plea of the APDOP, the Commission has granted exemption for this year for filing the petition for the FY 2016-17 in accordance to the Tariff Regulations of 2011.

- 7.1.3.** The Tariff Policy mandates that Tariff should be within plus/minus 20% of the average cost of supply by 2010-11 and requires Commissions to lay down a road map for reduction of cross subsidy. But it is not possible for the Commission to lay down the road map for reduction of cross subsidy, mainly because of lack of data regarding cost of supply at various voltage levels. The APDOP has not furnished the voltage-wise network cost. The Commission has gone on the basis of average cost of supply in the absence of relevant data for working out consumer category wise cost of supply.

7.2 Tariff categories

In the Petition for 2015-16, APDOP has not proposed any change for the existing Categories of consumers and tariff structure. The Commission considers, retaining the existing categories as stated below:

1. Domestic
 - a) *Kutir Jyoti*
 - b) *Domestic LT*
 - c) *Domestic HT*

2. Commercial
 - a) *Commercial LT*
 - b) *Commercial HT*
3. Public Lighting & Water Works
 - a) Public Lighting & Water works LT
 - b) Public Lighting & Water Works HT
4. Agriculture
 - a) *Agricultural LT*
 - b) *Agricultural HT*
5. Industrial
 - a) *Industrial LT*
 - b) *industrial HT*
6. Mixed Bulk Consumers HT
7. Temporary Consumers LT

7.3 Tariff Proposed by APDOP and Approved by the Commission

The Petitioner has proposed an increase in tariff for Industrial Category Consumers and Consumers seeking Temporary Supply by Rs. 0.10 per unit and Rs. 0.15 per unit respectively. Since there has not been any increase in tariff for any category of consumers over the last two years, the above proposal of the DOP for increasing the tariff for Industrial category and for Temporary supply is accepted by the Commission. It is also worth while to mention here that there has not been any objection from any quarter about this. Except the above, APDOP has not proposed any revision of the existing retail tariffs of any other categories of consumers to meet the revenue gap for the FY 2016-17. In addition to above, the APDOP in its tariff petition for 2016-17 has proposed to abolish the provision of Minimum Charges w.e.f FY 2016-17.

It is submitted by APDOP vide clause 4.2 in Chapter IV of the tariff petition that it being a state govt. Deptt. receives budgetary support from the Govt. of Arunachal Pradesh and hence any sort of revenue gap for the FY 2016-17 shall be funded by the State Govt. In view of the above, the Commission has accepted the above proposal of the APDOP for increase in tariff of Industrial Category and Temporary Supply and abolishing of Minimum Charges.

Tariff proposed by the APDOP and approved by the Commission are shown in Table 7.1 below

The Tariff schedule indicating category wise Tariffs, miscellaneous charges and general terms and conditions of supply as approved by the Commission are attached in Schedule I, II and III.

Table 7.1: Tariffs Approved by the Commission for FY 2016-17

Sl.	Category			Existing Tariff 2015-16	Proposed Tariff 2016-17	Approved Tariff for 2016-17
		Phase	Nominal Voltage	Rs. kWh	Rs. kWh	Rs. kWh
1	Non Commercial Consumers (Domestic)	Non Commercial Consumers (Domestic)- LT, AC 50Hz				
		1.1.	1-Phase,	230 Volt	4.00	4.00
		1.2.	3- Phase	400 Volt	4.00	4.00
		Non Commercial Consumers (Domestic)- HT, AC 50Hz				
		1.3.	3- Phase	11 kV	3.40	3.40
		1.4.	3- Phase	33 kV	3.25	3.25
		KJP & BPL connection- Non Commercial Consumers (Domestic)- AC 50Hz				
		1.5.	1-Phase,	230 Volt	2.65	2.65
2	Commercial Consumers (Non-Industrial)	Commercial Consumers (Non-Industrial)-LT, AC 50Hz				
		2.1.	1-Phase,	230 Volt	5.00	5.00
		2.2.	3- Phase	400 Volt	5.00	5.00
		Commercial Consumers (Non-Industrial)-HT , AC 50Hz				
		2.3.	3- Phase	11 kV	4.20	4.20
		2.4.	3- Phase	33 kV	4.00	4.00
3	Public Lighting and Water	Public Lighting and Water Supply Consumers- LT AC 50Hz				
		3.1.	1-Phase	230 Volt	5.10	5.10
		3.2.	3- Phase	400 Volt	5.10	5.10
		Public Lighting and Water Supply Consumers- HT, AC 50Hz				
		3.3.	3-Phase	11kV	4.20	4.20
		3.4.	3-Phase	33kV	4.00	4.00
4	Agricultural Consumers	Agricultural Consumers- LT, AC 50Hz				
		4.1.	1-Phase	230 Volt	3.10	3.10
		4.2.	3- Phase	400 Volt	3.10	3.10
		Agricultural Consumers- HT ,AC 50Hz				
		4.3.	3-Phase	11kV	2.75	2.75
		4.4.	3-Phase	33kV	2.65	2.65

Sl.		Category	Existing Tariff 2015-16	Proposed Tariff 2016-17	Approved Tariff for 2016-17
		Phase	Nominal Voltage	Rs. kWh	Rs. kWh
5	Industrial Consumers	Industrial Consumers- LT, AC 50Hz			
		5.1.	1-Phase	230 Volt	4.20
		5.2.	3- Phase	400 Volt	4.30
		Industrial Consumers- HT, AC 50Hz			
		5.3.	3-Phase	11kV	3.75
		5.4.	3-Phase	33kV	3.40
6	Bulk Mixed Consumers	5.5.	3-Phase	132kV & above	3.25
		Bulk Mixed Consumers- HT, AC 50Hz			
		6.1.	3-Phase	11kV	3.75
		6.2.	3-Phase	33kV	3.40
7		6.3.	3-Phase	132kV & above	3.25
		Temporary Consumers			
	7.1.	Metered Supply		6.35	6.50

Based on the Consumer base and the Cost of Power Purchase and other inputs, **the average cost of supply thus works out to Rs. 10.83 per kWh.**

This order shall come into force with effect from 01-04-2016 and shall remain effective till revised/amended by the Commission. The order shall be given wide publicity by the petitioner for information of the general public within seven days of the issue of the order.

Sd/-

Date: 29th February'2016

**(Digvijai Nath)
Chairman**

Schedule-I

Category Wise Tariffs: FY 2016-17

Category-1 Non- Commercial Consumers (Domestic)

A) Definition: The consumers under this category are defined as consumers using the electrical energy for domestic and nonprofit purpose such as lights, fans., heating devices, Televisions, VCR/VCP, Radio, Refrigerator, Air - conditioners, lift motors and all others appliances only for bonafied residential & non-residential but non-commercial use. This will also cover consumption of energy supplied for Government owned Residential and Non-Residential buildings Educational and Research Institutions. Charitable Institutions, Government owned Hospitals and Dispensaries, farm houses, Religious premises like Churches, Temples, Mosques, community halls and any other Institutions, Religious printing press (not engaged in commercial activity or private again, excluding those which are specially covered under other categories of this Tariff) or classifications as may be amended by the Commission from time to time.

Sl.	System of supply & Metering Point	Tariff (Rs. / Kwh)	Minimum Charges (in Rs./month)
1	LT- AC 50Hz		
1.1.	1 - Phase, 230 Volt nominal Voltage	4.00	Abolished
1.2.	3 - Phase, 400 Volt nominal Voltage	4.00	Abolished
1.3.	1 - Phase, 230 Volt KJP & BPL connections	2.65	Abolished
2	HT- AC 50Hz		
2.1.	3 - Phase, 11 KV nominal Voltage	3.40	Abolished
2.2.	3 - Phase, 33 KV nominal Voltage	3.25	Abolished

Note: Yard lighting, gate lighting, pumps and motors used in the same premises

shall be integral part of this category.

Category -2 Commercial Consumers (Non Industrial)

Definition: The consumers under this category are defined as non -industrial commercial consumers such as installations of commercial places, Government undertaking, public sector undertaking, Commercial houses, markets, and optical houses. Restaurant, Bars, tailoring shops, Refreshment and tea stalls, show-cases of advertisement, Hoarding theatres, cinemas, Hotels, Lodging and Boarding, Private nursing Homes and Hospitals, religious Hospitals, private run schools and Hostels and Boarding facilities and other educational institute demanding fees, photographic studios, Battery charging units, repair workshops and Newspapers press (newspaper printing press only) Petrol Pumps, etc or classifications as may be amended by the Commission from time to time.

Sl	System of supply & Metering Point	Tariff (Rs. /	Minimum Charges (in Rs./month)
1	LT- AC 50Hz		
1.1.	1 - Phase, 230 Volt nominal Voltage	5.00	Abolished
1.2.	3 - Phase, 400 Volt nominal Voltage	5.00	Abolished
2	HT- AC 50Hz		
2.1.	3 - Phase, 11 KV nominal Voltage	4.20	Abolished
2.2.	3 - Phase, 33 KV nominal Voltage	4.00	Abolished

Category - 3 Public Lighting And Water Supply Consumers

Definition: This category of the consumers shall be applicable to public Street lighting Systems in Municipality Towns, sub-Towns / Villages, etc. including Signal system, Ropeways on Roads and park lighting in areas of Municipality Town. Sub - town / villages. Pumps &

equipment for public water supply systems and Treatment plants and associated applications shall also be covered in this category or classifications as may be amended by the Commission from time to time.

Sl.	System of supply & Metering Point	Tariff (Rs. / Kwh)	Minimum Charges (in Rs./month)
1	LT- AC 50Hz,		
1.1.	1 - Phase, 230 Volt nominal Voltage	5.10	Abolished
1.2.	3 - Phase, 400 Volt nominal Voltage	5.10	Abolished
2	HT- AC 50Hz,		
2.1.	3 - Phase, 11 KV nominal Voltage	4.20	Abolished
2.2.	3 - Phase, 33 KV nominal Voltage	4.00	Abolished

Category - 4 Agricultural Consumers

Definition: The consumers in agricultural fields /firms for the purpose of (a) Pumps field lighting & other applications for farmers in their irrigation and cultivation & not connected to any attached commercial or industrial installations in the agricultural field of farm or classifications as may be amended by the Commission from time to time.

Sl.	System of supply & Metering Point	Tariff (Rs. /	Minimum Charges (in Rs./month)
1	LT- AC 50Hz		
1.1.	1 - Phase, 230 Volt nominal Voltage	3.10	Abolished
1.2.	3 - Phase, 400 Volt nominal Voltage	3.10	Abolished
2	HT- AC 50Hz,		
2.1.	3 - Phase, 11 KV nominal Voltage	2.75	Abolished
2.2.	3 - Phase, 33 KV nominal Voltage	2.65	Abolished

Category - 5 Industrial Consumers

Definition: The Industrial consumers shall cover all Government registered Industrial power consumers which are not covered by category No.2 (supply for Commercial Purposes), such as steel fabrication, motor body builders, power handloom industry, poultry farming, pisciculture, prawn culture, floriculture in green house, mushroom production, cold storage unit of pisciculture, agriculture, horticulture and any other type of industry where raw material is covered into finished products with the help of electrical motive power, colour photo labs. Government owned printing press and other printing press (Primarily engaged in printing for commercial gain), and government owned, public sector industries, etc. or classifications as may be amended by the Commission from time to time.

Note: All Non-Industrial & Commercial consumers within the same complex under a single service connections shall also be treated as industrial consumers if the total distribution is integrated in the industrial complex and load on non-industrial side is below 10% of the total sanctioned load.

Sl	System of supply & Metering Point	Tariff (Rs. / Kwh)	Minimum Charges (in Rs./month)
1	LT- AC 50Hz		
1.1.	1 - Phase, 230 Volt nominal Voltage	4.30	Abolished
1.2.	3 - Phase, 400 Volt nominal Voltage	4.30	Abolished
2	HT- AC 50Hz,		
2.1.	3 - Phase, 11 KV nominal Voltage	3.85	Abolished
2.2.	3 - Phase, 33 KV nominal Voltage	3.50	Abolished
2.3.	3 - Phase, 132 KV nominal Voltage & above	3.35	Abolished

Category - 6 Bulk Mixed Consumers

Applicability: The Bulk mixed consumers are those consumers drawing bulk powers at HT voltage having a mixed load of all categories of consumers such as a village, a town, a city, a colony, or a State or Region etc. drawing power at one metering point. It will also include a University Campus, All India radio complex College complex. Defense Installations, Railway complex, Government Complexes, etc. who arranges their own distribution of power with approval of competent authority. This will not include Industrial complex which may consist mixed load category 1,2,3,& 5 or classifications as may be amended by the Commission from time to time.

SI	System of supply & Metering Point	Tariff (Rs. / Kwh)	Minimum Charges (in Rs./month)
i.	11 kV Nominal Voltage	3.75	Abolished
ii.	33 kV Nominal Voltage	3.40	Abolished
iii.	132 kV Nominal Voltage & above	3.25	Abolished

Category - 7 Temporary Consumers

Definition: A Temporary consumers are those who would consume electricity for a limited period of time, which could be determined at its initial application itself such as:

- a) For marriage, puja, religious / public function / gathering, festivals and ceremonies which are of temporary nature up to a period not exceeding 90 days in case of metered supply.

- b) For commercial and Industrial purposes like cinemas, theatres, circus, carnivals, exhibitions, concerts etc, which are of temporary nature for private gain for a period not exceeding 30 days in case of metered supply or classifications as may be amended by the Commission from time to time.

Supply systems:

- a) Single phase, 50Hz, 230 Volts.
- b) Three Phases, 50 Hz, 400 Volts.

Note: Temporary connection shall be given at HT supply only on specific agreements of supply.

Tariff:

Metered supply Rs. 6.50 per Kwh:

In case of metered supply consumer shall be given temporary connection, with energy meter by the department after receiving full advance from consumer the cost of energy estimated as per connected load for the whole period and service connection charges. On closure of the programme accounts shall be settled as per actual meter reading.

Notes:

- a) Temporary services connection shall require prior approval from the next higher load sanctioning authority.
- b) The energy cost as per tariff above along with connection and disconnection charge will be realized in advance from the applicant before making the supply available to him.
- c) Applicant at his own expenses shall arrange the complete wiring for which temporary supply of power is required. It will also be the responsibility of the applicant to ensure that the wiring conforms to the technical & safety

requirement as specified by authorities.

- d) Energy bill, based in actual consumption shall be served to the consumer at reasonable interval. The amount of each bill shall be adjusted from the amount of advance & security deposit on closure of the temporary services.

Schedule- II – Miscellaneous Charges

1. **Meter Rent:** The Energy meter and its allied instruments required for registering of energy consumed as deemed to be under the ownership of the supplier, shall attract following monthly rental charges against regular maintenance, repair and labor cost of its replacement.
 - i. **Prepaid Consumers :-** As an incentive monthly rent for energy meter for prepaid consumer shall be NIL.
 - ii. **Post-paid Consumers :-** For post-paid consumers monthly rent for energy meter if provided by APDoP shall be as per following table. In case the energy meter is purchased and installed at the cost of consumers then there shall be no meter rent.

Sl.	Voltage Level	Energy Meter Specification	Rent. Rs/ Month
1.	Meter Rent		
a		LT Metering- AC	
	i.	Single Phase 220V	16.00
	ii.	Three Phase 400 V between phases (without CT)	26.00
	iii.	Three Phase 400 V between phases (with CT)	68.00
b		HT Metering- AC Complete Energy meter with CT/PT & other monitoring and indication requirement for AC Three phase HT supply	
	i.	11 KV system	670.00
	ii.	33 KV system	3350.00
	iii.	132 KV system	13401.00
c		Shifting Charges for Meters	
	i.	if resulted from reconstruction / modification of building and on the request of the consumer	per shifting Rs. 168.00
	ii.	If, the shifting is in the interest of the department.	Free of cost

2.	Replacement of the energy meter and its associated fittings and equipment shall be as per provisions of A.P. Electricity Supply Code-2013		
	i.	The supplier shall replace the meters & the allied fitting & the equipment free of cost in case of scheduled replacement under normal wear & tear of ageing or technology change.	
	ii.	The Consumer shall bear all the necessary cost in case of temporary shifting of the meters & its associated fittings and the equipment.	
	iii.	The Consumers shall have to bear the cost if replacement due to negligence of the consumer or losses attributable to the negligence of the consumer.	
3.		Charges for testing of Meters at the request of consumers	For each time
	i.	For AC Single Phase LT Energy Meter	134.00
	ii.	For energy meter without CT for AC three phase LT Supply	202.00
	iii.	For energy meter with CT for AC three phase LT supply	336.00
	iv.	For energy meter AC three phase HT supply	670.00

In case the meter fitted to the consumer premises is found to be defective from the very date of fitting, testing and replacement of meter will be done free of cost.

4. Testing of Consumer's Installation:

Testing & Inspection charges of consumer's installation:-

Should any consumer require the services of the supplier for testing and inspection & certification of the supplier's electrical installation on technical grounds following charges shall be paid in advance along with the application.

Sl.	Testing at Consumer Installation	Charges per Installation in Rs.
i.	1 phase service Wiring installations	202.00
ii.	3 phase service Wiring installations	320.00
iii.	HT Line installation of 11 KV system	670.00
iv.	HT Line installation of 33 KV & above system	1336.00

5. Disconnection and reconnection:

Charges towards each disconnection and reconnection as the case may be whether for punitive measures or on the request of the consumer, shall be as follows.

Sl.	Category of Work	Charges Per Connection
i.	All categories of connections	134.00
ii.	Disconnection only	134.00

6. Charges for new service connection or Replacement of connection wire, cut out, fuse etc. or any other works / jobs etc. shall be guided as per the provisions of the A.P. Electricity Supply Code-2013.

7. Re-rating of Installation & revised load sanction:

Fees for rerating of the consumer's installation at the request of the consumer & for revised load sanction.

- i. Rs. 134/- per case for LT supply voltage systems.
- ii. Rs. 670/- per case for HT supply voltage systems.

8. Security amount for providing Electric Plant & Meter to the premises of Consumers : (interest bearing/ refundable)

All consumers except under special provisions made under Govt. policy, such as under KJP or BPL household electrification, interest bearing meter security shall have to be paid against the energy meter provided. The interest rate shall be as defined in Para 4.119 of the Arunachal Pradesh Electricity Supply Code-2013.

Sl.	Meter Specification	Security Amount – Rs.
i.	For AC single phase LT supply of connected load	1336.00
ii.	For AC three phase LT supply of connected (without CT) load	2681.00

Sl.	Meter Specification	Security Amount – Rs.
iii.	For AC three phase LT supply CT operated	4691.00
iv.	For AC three phase HT supply, CT & PT operated	33448.00

Note: In case of deposit works/ or of a new connection where this amount is incorporated into the estimate, then no separate security amount on account of above is required to be deposited by the consumer.

8.1. Security Deposit: (interest bearing refundable / adjustable)

To safe guard against default by non-payment of bills against energy consumed interest bearing security deposit shall be deposited by the consumer in advance before the service is provided in accordance to the provisions of A.P.Electricity Supply Code-2013 (KJP & BPL household connection shall not pay Security deposit as per present policy of the Govt.) The interest rate shall be as defined in Para 4.119 of the Arunachal Pradesh Electricity Supply Code-2013. A sample calculation showing Security Deposit payable per KW of connected load for new connections is given below :-

RATES OF SECURITY DEPOSIT (As per A.P. Electricity Supply Code-2013

Formula for calculating security Deposit for new connection = Load x Load

Factor of the category in which consumer falls as per Electricity supply code x (Billing cycle + 30 days) x 24 hours x Current Tariff

Sl.No.	Category of Consumers	As per A.P. Electricity Supply Code' 2013 (Per KW)
1.	Domestic Category: LT 230 Volts LT 440 Volts HT 11 KV HT 33 KV KJP	 Rs. 1728.00 Rs. 1728.00 Rs. 1469.00 Rs. 1404.00 Nil as per Govt. Policy
2.	Commercial Category: LT 230 Volts LT 440 Volts	 Rs. 3600.00 Rs. 3600.00

Sl.No.	Category of Consumers	As per A.P. Electricity Supply Code' 2013 (Per KW)
	HT 11 KV	Rs. 3024.00
	HT 33 KV	Rs. 2880.00
3.	Public Lighting:	
	LT 230 Volts	Rs. 2938.00
	LT 440 Volts	Rs. 2938.00
	11 KV	Rs. 2419.00
	33 KV	Rs. 2304.00
4.	Agricultural Consumers:	
	LT 230 Volts	Rs. 1473.00
	LT 440 Volts	Rs. 1473.00
	11 KV HT	Rs. 1307.00
	33 KV HT	Rs. 1259.00
5.	Industrial Consumers:	
	LT 230 Volts	Rs. 3024.00
	LT 440 Volts	Rs. 3024.00
	HT 11 KV - Single shift	Rs. 2700.00
	HT 11 KV - Double shift	Rs. 4050.00
	HT 11 KV - Continuous	Rs. 5400.00
6.	Industrial Consumers:	
	HT 33KV - Single shift	Rs. 2448.00
	HT 33KV - Double shift	Rs. 3672.00
	HT 33KV - Continuous	Rs. 4896.00
7.	Industrial Consumers: 132 KV & Above	
	Single shift	Rs. 2340.00
	Double shift	Rs. 3510.00
	Continuous	Rs. 4680.00
8.	Bulk Mixed Consumers:	
	HT 11 KV (LF-50%)	RS. 2700.00
	HT 33 KV (LF-50%)	Rs. 2448.00
	EHT 132 KV & above (LF-50%)	Rs. 2340.00
9.	Public Water Supply	
	LT (220 V & 400 V)	Rs. 2424.00

Sl.No.	Category of Consumers	As per A.P. Electricity Supply Code' 2013 (Per KW)
	HT 11 KV	Rs. 1996.00
	HT 33 KV	Rs. 1901.00

- 8.2. Charges for Testing of Transformer Oil:** The departmental charge for testing oil of private owned transformers for each sample of oil shall be charged Rs. 134.00 per sample test.

Schedule - III GENERAL CONDITIONS OF SUPPLY

- 1. Payment:** The bill shall be paid in full inclusive of all arrears if the consumer within the last day for payment indicated on the body of the bill. However the consumer making payment in full within due date indicated on the body of the bill will be entitled to avail rebate.
- 2. Application for Connection:** The Consumer shall apply for service connection as per the provisions of A.P. Electricity Supply Code-2013.
- 3 Surcharge/Penalty for late payment of bill:** If payments is not received within last date for payment, the bill will be treated as invalid and the amount outstanding will be carried over to the next month's bill as arrear. Simple interest @2% will be charged as penalty on outstanding amount each 30 days successive period or part thereof until the amount is paid in full.
- 4 Sanctioning Authority:** Service connection shall be given only after load sanction by the competent authority as per delegation of power accorded as under.

Categories of consumers

- | | |
|--|-----------------|
| a. AE (E) up to 5 KW of connected load | 1,2,3,4,5 & 7 |
| b. EE up to 50 KW of connected load | 1,2,3,4,5 & 7 |
| c. SE up to 500 KW of connected load | 1,2,3,4,5,6 & 7 |

d. CE Full power of connected load above 500KW 1,2,3,4,5,6 & 7

Security deposit and cost of service connection shall have to be deposited in advance on receipt of technically sanctioned estimate.

5 Rebate:

For Post-Paid Consumers: Rebate of 3.0% on the bill amount shall be available to the billed amount on current bills if the dues are cleared within due dates. The electricity bill shall show the amounts to be paid within due date (after 3% discount) and payable after due date.

For Pre-Paid Consumers: Rebate of 5% on re-charge amount shall be made available for pre-paid consumers.

6 Single Point Delivery: The above tariff is based on the supply being given through a single point of delivery and metering at one voltage. Supply at other points at other voltage shall be separately metered and billed for and shall be considered as separate connection.

7 Mixed Load: Mixed domestic and commercial establishment shall be treated as commercial establishments if the load on commercial side is more than 10% of the total connected load.

8 Metering Point: The metering point shall be the point of delivery of energy at the declared nominal voltage.

9 Billing Cycle: Normally the billing cycle shall on monthly basis.

10 Minimum charge: A consumer shall not have to pay the minimum charge and have been abolished.

11 Ownership meter: The energy meter and its allied instrument used for registration of energy data only shall deem to be the property of the supplier and the consumer shall have no right over it for ownership after the

commencement of supply.

All consumers getting their supply at HT but metered on LT side of the transformer shall be charged an additional 3% over the metered consumption

12. Maintenance & Replacement of Energy meter: It shall be governed by the provisions of A.P. Electricity Supply Code-2013.

13. Default: A Consumer shall be automatically called a defaulter if he fails to clear all the outstanding & current bills accumulated for a period of 2 months. On being a defaulter, the consumer shall be liable for disconnection after adjustment of security deposit against the energy bill account. After adjustment of security deposit, if the consumer desires for reconnection the consumer shall have to clear all outstanding dues and pay fresh security deposit.

14. Watch and Ward of Meters: The consumers shall be responsible for the safe custody of meter(s), MCBs/CB etc. if the same are installed within the consumer's premises. The consumer shall promptly notify the licensee about any fault, accident or problem noticed with the meter.

15. Billing : All the bills raised within billing cycle of April month shall have the stepped-up tariff irrespective of whether a portion of the billing cycle falls within the previous month of March or not.

16. Existing connections / agreements in force: All such connections the before the commencement of this tariff structure shall deem to be effected under this tariff schedule & related terms and conditions shall have precedence over the existing agreements.
